

AMERICAN GAS ASSOCIATION MONTHLY



Vol. II

No. 11

November, 1920

"Expositions are the Timekeepers of Progress"

Let us make our 1920 Convention
and Exhibition real timekeepers
of the progress of the gas industry
and by our attendance, interest
and cooperation set a new mark of
enterprise and advancement.

GEO. B. CORTELYOU

ENTERED AS MATTER OF SECOND CLASS AT THE POST OFFICE, EASTON, PA.

Acceptance for Mailing at Special Rate of Postage Provided for in Section 1103, Act of October 3, 1917, Authorized July 10, 1918

RED CROSS IS SERVICE

THE FOURTH RED CROSS ROLL CALL is not a drive.

It is not a campaign.

It is not an effort to raise any specific sum.

The \$1.00 dues of 10,000,000 people for 1921 are payable and this Roll Call is merely the organized activity of collection.

The American Red Cross, by its Congressional Charter, is officially designed for the following purposes:

"To furnish volunteer aid to the sick and wounded in time of war, in accordance with the treaty of Geneva;

"To act in matters of volunteer relief and as a medium of communication between the American people and their Army and Navy;

"To continue and carry on a system of national and international relief in time of peace and to apply the same in mitigating the sufferings caused by pestilence, famine, fire, floods and other great national calamities and to devise and carry on measures for preventing the same."—Act of Congress, Jan. 5, 1905.

ANSWER THE RED CROSS ROLL CALL, November 11, Armistise Day, to November 25th—Thanksgiving.

C O N T E N T S

VOLUME II

NOVEMBER, 1920

NUMBER 11

	PAGE
Accounting Section	677
Advertising Section	685
An Industrial Fuel Paper.....	694
A Plea for Gasoline Conservation.....	676
A Special Sale of Tank Water Heaters.....	693
Associations Affiliated with the A. G. A.....	707
Barometer of Public Interest Rises.....	664
Chamber of Commerce Demands Fair Rates for Utility Service.....	666
Commercial Section	693
Cooperation in Electrolysis Research.....	704
Discussion of Accounting Section Papers and Reports.....	684
Editorials—The Meaning of the Word.....	658
Swinging Back	658
Employment Bureau	719
For the Early Comer.....	669
From <i>The Nation's Business</i>	669
Have You Forgotten the Meter?.....	685
Instructions in Gas Conservation.....	666
Live Issues Before the Section.....	690
List of 1920 Exhibitors.....	700
Manufacturers' Section	697
Men and Business	668
Motor Fuel Manufacturing and Accounting.....	677
Question Box	712
Rate Increases Secured—List No. 39.....	708
Scope and Service	665
Second Annual Convention and Exhibition of the A. G. A.....	671
Stoppages in High Pressure Mains and Services.....	702
Study this Section's Exhibit at the Convention.....	692
Technical Section	701
The Men Who Make Friends.....	659
The Utilities	667
Window Display Suggestions—A. G. A. Service No. 20.....	695
\$100 Prize Offer	675
500 B. t. u. Standard for Baltimore.....	675

AUTHORS

Duvall, B. A.—A Special Sale of Tank Water Heaters.....	693
Patterson, F. H.—Motor Fuel Manufacturing and Accounting.....	677
Shattuck, J. D.—Stoppages in High Pressure Mains and Services.....	702

FOR STATEMENTS AND OPINIONS CONTAINED IN PAPERS AND DISCUSSIONS
APPEARING HEREIN, THE ASSOCIATION DOES NOT HOLD ITSELF RESPONSIBLE

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Vol. II NOVEMBER, 1920 No. 11

The Meaning of the Word

*ASSOCIATION—In Union there is
Strength.*

Elsewhere in this issue we have reprinted a full page editorial from the pen of Lucius S. Bigelow, Editor of *The Gas Industry*. He has titled it "Scope and Service," and in it has embraced the subject of the American Gas Association. There could be in terms of the printed page no finer tribute to this organization. He has substituted for the A. G. A.'s two years old "to do," the more timely and satisfactory, "has done," and "is doing."

We are in the truest sense, an association,—a body of workers, individuals and groups centered for the purpose of combining our separate experiences, good and bad, to the improvement of the common lot; our separate ideas and resources; the accumulated knowledge of our eldest members with the enthusiasm of our youngest,—all to the end that the gas industry as a whole may benefit, thus strengthening each and every part.

Countless expressions for the definition of the word, simmered down all mean one and the same thing. From the epic Lincoln's,—*"A House Divided Against Itself Cannot Stand,"*—to the caption our coins bear,—*"E Pluribus Unum"*—they convey but one thought, to speak the homely language of Webster's, *"The condition of having combined for a common purpose."*

Bear this in mind when considering the second annual convention. We get out of things no more than we put into them. During the past year had every member of the A. G. A. been unable to spare the time from his individual affairs to devote his bit to the common problems the hopes and expectations of

six months ago would still be hopes and expectations. As it is they are accomplished and filed in the lists of yesterday's business. Now we are about to assemble to consider the needs of to-day and their relation to the business of to-morrow.

"Every man owes part of his time to the upbuilding of the profession to which he belongs."—Theodore Roosevelt.

Swinging Back

In the *Boston News Bureau* of October 5th, appears in the form of an editorial, a lengthy comment on "The Utilities."

It tells us that the adverse conditions which have been affecting the public utilities during these many months are already beginning to change for the better, and that utility securities are becoming re-established in the confidence of the investor.

This is typical of a number of recent expressions by financial writers and authorities on investments. After a battle against what for a time seemed overwhelming odds, the pendulum is swinging back!

We could hardly expect to attract fresh investments in the same breath with which we were forced to admit our liabilities. The public will not sink its money into a concern incapable of earning a profit on its daily operation. Six months ago our cry was—"tell the people"; to-day the people have heard our story, and in most cases where clean cut business wisdom prevails confidence and support have been won. And now with a rate increase list that day by day grows in length, we may take our rightful place in the ranks of virile business once more, and stand competitors with other industries for the savings of America!

Inherently there can be no safer place for the working dollar, than the public utility, excepting of course, government bonds. It is, in our present civilization, an absolute essential, a necessity we shall have with us always, and year after year its investments go on earning a normal, regular rate for the individuals who planted them there.

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The Men Who Make Friends

On every man who is serving the public as a gas company employee there rests a great responsibility. In his daily visits to the homes of the consumers of gas he creates and leaves behind impressions which form a fixed attitude of mind of the consumers toward the company. Needless to say, courteous treatment on his part toward the company's customers, coupled with a satisfactory transaction of whatever work or business dealing is entrusted to him, can leave only one impression with fair-minded people.

The employee is the representative of the company in the truest sense, and as such it is largely in his keeping to create a feeling of good will and fair mindedness between the customers and the company that makes the conduct of a public utility a pleasurable duty.

To do this intelligently and well the employee's interest in the company must be more than that of the mere employee, receiving a daily wage and giving in return only what, in his judgment, that wage pays for. The employee must realize that his ultimate advancement is very largely dependent upon the prosperity

and development of his company. To this the employee can contribute in no small part by faithfully reflecting the ideal of good service and fair dealing of his employers.

The first and chief aim of every gas company is to make and sell gas at a fair profit and at the same time give just as good a service to the consumer as it is possible to give. A fair profit depends on good service, and the best service is not possible without a fair profit. And each depends upon full and complete team work between company executives, department managers and division heads and company employees—from the office boy and youngest clerk up to the highest paid skilled workman.

To continue in service and keep up a service to consumers without a break, the company must first of all be able to buy gas oil, coal and coke and get all needed labor in every branch. To build and equip a gas plant, then buy gas-making material and employ labor requires capital—just plain dollars and cents.

Suppose John Smith knows of a town where there is no gas works and thinks

NOTE.—This article is being printed in pamphlet form for the use of companies desiring to distribute it to their employees.

there are enough people living there who will use gas to justify putting in a plant. He has some money but not enough, so he goes to Thomas Brown, James Richards and William Jones, and they agree to put their savings in with Smith's. The four of them form a company or corporation by legal agreement. They are not gas manufacturers, have other business interests, and employ men skilled in making and selling gas, install them as working officers of the company, while they constitute a managing board of directors.

A gas plant is built and business begins. The company charges a rate for gas that has been fixed by a public utility commission on the basis of the amount of money invested, cost of equipment, cost of gas oil, coal and coke, cost of mains and piping, cost of installing meters, and general cost of labor. This rate is supposed to cover all costs of operating the plant, including labor, producing the gas, delivering it to the consumer through the mains and service pipes and meters, keeping the books of the company, reading the meters, making up and sending out monthly bills, and collecting the money due.

But the gas rate must do still more—it must be big enough so that when all the consumers have paid all their bills, there will be money left to pay the officers of the company, taxes and insurance, and cover expenses of keeping the plant and machinery in good condition. And there must still be enough cash left to pay to the four investors, Smith, Brown, Richards and Jones, a fair rate of interest on the money each has put into the business. This is called among business men the "rate of return," and it is the payment due to each of the four investors for risking his money in a business that furnishes to the public—to the gas consumer—a service both cheap and reliable.

The investor has earned this payment just the same as any and every employee of the company has earned his wages, and is just as legally and morally entitled to it as any workman is entitled to his pay. It is his reward for giving the use of his savings and giving his own time and labor, just as the interest on your Liberty bonds is your reward for investing your savings in government securities.

Now as the town grows, and its growth it greatly helped because of the gas plant and the fact that prospective buyers of homes know they can get gas, cheaper, cleaner, and far more convenient for cooking and heating than either coal or oil, owners of the plant find that they must extend their mains to outlying and rapidly building up sections. As new homes are built and population increases, the four original investors find their plant is too small to supply the amount of gas needed and that they must add to the daily capacity.

They personally have no more capital to invest, yet they must have more money to enlarge the gas works. So they plan an issue of bonds. These bonds are secured by the plant itself and are put on the market to be sold to those residents of the growing town who may have small sums of money to invest. The bonds are taken by local business men and their wives, school teachers, policemen and firemen, young men and women working on a salary, and even by the gas company's own employees.

The town thrives and becomes a city, and again the owners, now numbering a thousand or more, because every bondholder really is a part owner of any public utility company, find that the plant must be enlarged and new mains laid to care for the increasing demands for gas for domestic purposes plus the gas that is

now being used in so many ways for so many different industrial purposes. More stock and bonds are issued to pay for new equipment and needed improvements, and again local residents are the buyers.

Thus, the amount of money invested by holders of small blocks of stock reaches a sum where it exceeds the total put up in the first place by the original investors, and the public, the gas company's own consumers, come to be the real controlling owners of the plant, and Messrs. Smith, Brown, Richards and Jones are merely directing employees of the local community of stockholders.

Now the most certain thing in the world is that the public is not going to buy stock and bonds of any gas company unless that company can get a price for its gas that will enable it to pay a fair rate of interest. For when a company sells bonds it really is borrowing the money under a promise to pay a certain rate of interest to the bondholders.

Consequently, when political agitators in a local community prevent the company from getting a price for its gas that will meet increased costs of coal, oil, coke and labor, those political agitators are hurting the gas company and every holder of stock or bonds. They also are hurting the city for the reason that a city grows and develops largely in proportion to the growth and development of its public utilities—that is, the gas company, the street railways, the electric lighting plant, and the telephone.

No town can grow into a city to-day, nor a small city grow into a big one, unless the investors owning the companies that furnish a public service are allowed to make a fair and reasonable profit on the money they have invested.

A starving gas company cannot give good service; an underpaid street car

system cannot give good service, and poor service by public utility companies drives away prospective residents. And when a city stops growing, business stops going to it. When business stops going to it, the city begins to die.

So, it all comes down finally to this: For any city to begin to grow and keep on growing all capital invested must be allowed by city or state government to earn a fair rate of interest. And that applies to the gas company just the same as to any other company.

Now, most everybody knows these facts, but there are a great many thousands of persons in every community who forget such things when the question of fair play and fair pay—just a square deal all around—comes up in connection with the gas company or the street railways or the electric light plants. These concerns are called public utilities. They render a service to the public under rates regulated by a public service commission. Consequently, the majority of the public, even though the public really owns the utilities of the country, are slow to realize that a gas company cannot run its business at a loss any more than a private enterprise can.

The public makes up the customers of the city's department stores just the same as it makes up the customers of the gas company, yet nobody would expect the department store to do business without a fair profit. Why, then, expect the impossible of the gas company. In the case of the department store, the public has no choice but to pay the prices demanded or do without the goods wanted. But in the case of the gas company, the public has the upper hand always, and need pay only that price which will give the investors a just and reasonable profit. There can't be any profiteering by a public service company for there always is the regulatory commission to see that the

company charges no more for its service than will permit a fair rate of return.

This ought to work both ways. The regulating body should see to it that the public does pay enough to enable the gas company to meet tremendously increased costs of materials and go right along doing business. But, it is not within reason to expect the men whose duty it is properly to see to this unless they can and do have the full moral support and backing of the people who make up the local community. Too often public opinion is swayed by local political agitators who have only their own petty interests in mind. The public's best interests are best served when the gas company and all public service concerns are prosperous. Because then and then only is the public itself the most prosperous.

Now the prosperity of the gas company employee depends largely on the prosperity of the company itself. If the company is losing money because of a rate too low in proportion to the present cost of coal, oil, coke and labor, the employees are suffering also.

So it is up to every gas company employee in every branch and every department, to make it part of his job to see that the company's consumers and the public in general do not forget what everybody knows, and nearly everybody admits—that is, that no gas company can do business at a loss; that no gas company can give good service without it makes a good profit, and that poor service on the part of any gas company, or street car company, or electric light plant, is an immediate black eye for any town, for any city, anywhere in any state.

To the average consumer you, Mr. Employee, are the gas company. The consumer does not know the company's president or the general manager, but he does know you, and by your actions, your treatment and your general conduct,

he is going to judge the company, and it is largely up to you whether he is going to be friendly or unfriendly.

Don't you see quickly what an influence you have? Don't you see what a power for the good of your company you can become? And, if you are interested in the welfare of your employers, you are going to treat the consumer so he will have no complaint against you and if you do your part there may be fewer complaints against the company.

We all know that gas consumers make a good many demands that seem unreasonable and ask a good many questions that seem foolish. But if you come as near filling the demands as you can and if you answer the questions courteously and to the best of your ability, then you've made friends for yourself and for your employers, instead of enemies for your company and possibly complaints against yourself.

This works to your advantage as well as that of the company. Thousands of employees have won better positions just by being polite to customers and doing the best they could—always giving the best they had. And not one ever lost by it.

When a consumer complains against the cost of gas and calls a proposed rate increase "unfair" and "an outrage" and the like, you, Mr. Employee, can do a whole lot toward leaving a satisfied customer by explaining, courteously, that gas oil that used to cost from three to four cents a gallon now costs from fourteen to sixteen cents; that coal has gone sky high in price, and that no company can pay these enormous price increases and go on making gas at the same old rate. If you don't know what the increases are, officers of your company quickly can give you the information.

This applies also to those of your friends you meet every day. If they have

a kick against the gas company they are almost sure to talk to you about it. And maybe the fault isn't with the company at all. Perhaps the trouble is only a small one and easily remedied. Why can't you tell your friend just what to do to have his complaint taken care of—just whom to go to and when and where.

One big company recently had a complaint of "poor gas." It was in the form of a petition signed by twenty-five tenants in one apartment house and was sent to the mayor of the city. He sent it to the gas company. An investigation showed the complainant's gas stove hadn't been cleaned for years and the burners were choked up with dirt and soot and grease. And despite the fact that the stove was eighteen years old, it gave perfect service after a thorough cleaning, and the housewife and her twenty-four neighbors agreed that the gas was all right. The investigator left everybody so happy, they agreed to sign and send to the mayor and the gas company a statement that they had all been all wrong. The point is that one employee by giving his best service to his employer and being courteous, changed twenty-five persons from complainants to friends of the gas company.

Again you see, Mr. Employee, what an influence you can be for the good of your company. And so it goes all along the line. There's the man who works right where the gas is made. He doesn't come much into touch with the consumer except as they are among his personal friends. But there's a good deal of mystery about gas making after all, and this man at the gas works can do much by telling how oil enters into the process and what oil used to cost and what it costs now because there are so many automobiles and motor trucks that are eating up gasoline, a product of petro-

leum, and the more gasoline there is made from the crude oil, the less there is left for gas-making purposes.

In the same way, the man who is putting in new street mains and service pipes can tell why such extensions cost so much more to-day than four or five years ago. Raw materials have increased tremendously in price, because of war-time conditions that have not yet been straightened out, and because of higher freight rates and the cost of labor which has had to have more wages to meet the increased cost of living.

The men who put in new meters, read the meters and collect the monthly bills, and those who investigate and remedy complaints, probably have more and closer contact with the average gas consumer than any other class of employee. And these men can have the biggest kind of influence in making and keeping the consumer friendly or unfriendly to the company. Maybe it is going a little too far to say these men almost can make or break a gas company, but it is a mighty sure thing that their treatment of the company's customers can do a whole lot more than the company's officers toward making and keeping a good reputation for the company. They daily go into the home. They consult the women of the households, and 70 per cent. of the gas yearly consumed in the United States is used in operations controlled almost entirely by the housewife. The average woman is a perfectly reasonable sort of person. But she does want to know about things, and you, Mr. Employee, can and should answer her questions plainly and courteously. Tell her just why it costs more to make the gas that they use for so many different purposes every day than it did four and five years ago. If you don't know, any official of your company can tell you. Every woman knows that she pays more

for everything she uses in her home than she did five years ago. And you can tell her that your gas company has to do the same thing. And you easily can prove to her that her gas bill is about the smallest, if not entirely the smallest monthly item of household expense that she has.

You, Mr. Employee, also can bring home clearly to the consumer that there is a daily increasing number of persons who are going slow in buying a winter supply of coal at the present terribly high prices, and who expect to depend on a gas heater and the gas company for a large part of the household heating. You can explain that gas companies also have to meet this high price of coal, and that it is increasingly hard to buy gas oil, even at constantly increasing prices, and

that unless some relief is obtained there are a lot of gas companies all over the country that are going to be forced to close some time during the coming winter.

This may not be true with the particular company you work for, but a good many are near the danger line every week.

So, we finally come back to the starting point. A gas company must make a fair profit to give good service. Continued service depends on fair rates. All these things depend on fair public opinion. You, Mr. Employee, can make public opinion favorable or unfavorable to your company.

After all, it is very largely up to you.

The Barometer of Public Interest Rises

In the Cumulative List of Rate Increases No. 6, recently issued by the Association, are the records of all rate increases reported to us up to September 15, 1920, and they tell a story of unusual interest. We believe the list is a fairly complete one. It is to be regretted that to get such information requires considerable effort and some companies have failed to file their figures although repeatedly urged and requested to do so. The data at hand shows 1,288 rate increases allowed by various regulatory authorities since the compilation of these records was first undertaken in 1917; these increases directly affecting 689 separate companies. Three hundred companies more or less have not been allowed increases in rates, but many of them beyond doubt are soon to realize their just due. The wave of popular recognition of the necessity for fair treatment of gas companies in the matter of rates is not receding. The gas industry collectively must continue its demand for fair treatment until justice has been done to all.

Scope and Service

IT is not a narrow scope or vision that one finds dominates in the American Gas Association. To the contrary there are broadtread ideas and purposes ever at work in that admirable organization. The result of such a condition is service to members, yes, to the industry at large, for where one finds breadth of vision big things not only may be expected, but such are sure to result.

The type of men in positions of trust in the A. G. A. bespeaks activity, right purpose, live methods, co-operation, not competition, with members. In other words, the Association's work in behalf of its members individually and collectively, including the manufacturers of equipment and appliances may be spelled with seven letters, the same number that so frequently is found mentioned in Holy Writ and too the word spelled is one for which the "Good Book" stands, namely, "Service."

The very fact that the A. G. A. is rendering its members the fine service that it is, should tempt many more gas companies and appliance and equipment manufacturers and their representatives to take out memberships.

Fine progress has been made through the membership campaign of the A. G. A. Many members and company-members have been added during the recent past and the association recognizing the value to it and the industry at large, of the magazine press of the field, has extended to the publications unlimited co-operation and in return, as a consequence, has received a wealth of service from the publications and their publishers.

It's a true saying, that "one gets out of things that which he puts into them," thus through the A. G. A. co-operating freely with the press of the field, the press has reciprocated freely. A happy condition obtainable only where an association is liberal in its dealings with others, and with that important factor in the field, the trade press. Give the press half an opportunity and it will return two-for-one every time, but show a narrowness of purpose, an intent to sacrifice the press for so-thought personal gain, and an association may expect, and very naturally so, a corresponding return.

Narrowness begets narrowness, while open handed liberality and unrestricted co-operation will beget like, in return.

The A. G. A. may well be observed by other associations and its breadth of scope copied. Join the A. G. A. and you join a thing of true merit and service. You will get out of it even more than you are asked to put into it.

LUCIUS S. BIGELOW.
(From the *Gas Industry*.)

Chamber of Commerce Demands Fair Rates for Utility Service

THE Chamber of Commerce of Queens Borough, comprising one of the most rapidly growing sections of New York City, has gone on record as emphatically in favor of permitting public utility companies to charge a rate for their service which shall be sufficient to pay all operating expenses, maintain all plants in good condition, keep up the credits of the companies, and pay a fair return upon capital invested in the properties.

At a recent meeting, members of this Chamber of Commerce adopted a resolution holding that public utility companies could not furnish an adequate and dependable service without adequate rates. The resolution further made the demand that municipal and other public authorities having supervision or regulatory power take such action as may be necessary in order that public utilities hereafter may charge adequate rates and in consideration of such rates be required to render proper and efficient service to the public.

The resolution in full is as follows:

WHEREAS, The Chamber of Commerce of the Borough of Queens recognizes that the best interests of the community require that its public utilities, including the surface, elevated and subway railroads, both electric and steam, as well as gas, telephone, electric and water companies, should perform their obligations to furnish adequate, continuous and dependable service to their patrons, the public, and

WHEREAS, Such service cannot be furnished unless the rates collected therefor are sufficient to pay operating expenses, maintain the plants in condition capable of rendering efficient service, maintain its credit and pay a fair return upon the capital invested in the property devoted to the public use; now, therefore,

Be it Resolved, That the Chamber of Commerce of the Borough of Queens demands that the municipal and other public authorities having supervision or regulatory power, contractual or otherwise, over the rates of public utilities take such action as may be necessary in order that such corporations may hereafter charge rates sufficient to enable them to pay all expenses of operation, including maintenance of plant and equipment, maintain its credit, as well as a fair return upon the capital invested in the property devoted to the public use, and in consideration of such adequate rates for service the public utilities be required to render proper and efficient service to the public.

Instructions in Gas Conservation

Public school instruction in gas conservation was begun in Cleveland recently, when thirty household physics students of West Technical High School took their first lesson in the demonstration room of the East Ohio Gas Company. The instruction will be part of the annual class work in household saving.

GENERAL

CHAIRMEN OF GENERAL COMMITTEES ORGANIZED TO DATE

National Bureau of Standards (Advisory Committee)—O. H. FOGG, New York, N. Y.
Accident Prevention—JAMES B. DOUGLAS, Philadelphia, Pa.
Amendments to Constitution—WM. J. CLARK, Mt. Vernon, N. Y.
Chamber of Commerce, Membership in—CAPT. WM. E. MCKAY, Boston, Mass.
Colorific Standards—J. B. KLUMPP, Philadelphia, Pa.
Central Development and Testing Laboratory—W. H. GARTLEY, Philadelphia, Pa.
Co-operation With Educational Institutions—C. A. MUNROE.
Educational—WALTON CLARK, Philadelphia, Pa.
Emergency Committee—P. H. GADSDEN.
Finance—E. H. ROSENQUEST, New York, N. Y.

Gas & Electric Service (National)—W. R. ADDICES, New York City.
Gas Oil Committee—J. B. KLUMPP.
Gas Securities—RANDAL MORGAN, Philadelphia, Pa.
Funds for Gas & Electric Service—H. L. DOHERTY, New York, N. Y.
National Fire Protection Assn., Membership in—W. R. ADDICES, New York, N. Y.
Relations with Other Assns., etc. (Formation of Geographic and Company Sections)—L. R. DUTTON, Jenkintown, Pa.
Standard Gas Appliance Specifications—W. T. RASCH, New York, N. Y.
Standard Pipe Threads (International)—W. CULLEN MORRIS, New York, N. Y.
Taxation—P. H. GADSDEN, Philadelphia, Pa.

The Utilities

That the securities of public utilities are rapidly being reestablished in the confidence of the investing public, is clearly indicated by recent editorials of prominent financial writers, as well as in the favorable tone of market letters sent out in the last thirty days by investment houses and financial institutions generally.

As typical of the new feeling toward the utilities are the following editorials from the Boston News Bureau of October 5, and the Philadelphia Ledger of October 6:

AN interesting, and fairly significant, item of yesterday's stock market comment mentioned the "taking in hand" of the long despised tractions in the last half hour's trading. Relative strength actually developed in poor old B. R. T., and equally poor and old Third Avenue.

This constitutes one of the logical and wholesome signs of the times. It comes about in response to changing conditions, just as did the renaissance in the low-priced rails and later in the investment or dividend-paying rails,—just as, conversely, because of altered conditions, many of the industrials meanwhile lost their boom-time prestige.

After a long season of tribulation, the public utilities are getting a glimpse of sunshine. About every condition adversely affecting them, physical and financial and psychological, having got about bad as it could possibly be, has begun to change for the better. Most important of all, as ensuring their escape from general bankruptcy, has been the new temper displayed toward them by the public and by the public bodies who officially reflect that temper.

Regulatory bodies are beginning to have the moral support of the public, which was at first lacking, and which was all that was needed, to insure fair and liberal consideration of the needs for increased rates. At the same time there is a broad realization on the part of the public of the position into which the utilities have been forced. The voice of the people is being raised in increasing strength in the demand that such essential service as that rendered by these companies be put on a stable, profitable basis through fair and reasonable treatment in the matter of rates. Only a little while ago there was popular clamor against any rate advance.

In situations where necessary action has not yet been taken, it may be expected to follow, for the economic disaster that must inevitably attend the strangulation of utilities is now pretty generally understood. The services created and financed by the people themselves to supply them with commodities of daily necessity — gas, electric light and power, telephone and the street railway — are at last approaching a day when they can afford suitable returns to those who believe in their inherent strength.

At the same time that income is thus being protected and restored, the terrific strain of outgo is tending to lessen. The costs of the myriad materials that utilities use have begun to recede, as part of

the general price sweep. Probably the crest of their wage burdens has been seen. The signs also are that the intrinsic cost of new capital as measured in interest rates is also headed downward, at the very time that their claim to a share in new capital is being fortified.

Hence the gradual accumulation reported lately under way by shrewd investors who know from careful analysis of all these factors of rates, expenses and capital costs and from the recently expanding volume of utility business that the financial status of many utilities has become decidedly better than would be indicated by the savage depreciation their securities have suffered.

Men and Business

By RICHARD SPILLANE

Public utilities are coming back. They have had a hard time, some of them a very hard time, but the skies are clearing. Investors are beginning to see virtue in gas, light, power and traction properties that have been friendless for years. It will take a lot of money to bring some of them back to full health and strength, for they had all the strain to which properties like the railroads were subjected in the war period without the financial support the government extended to the steam transportation companies.

But they are coming back. And it is a good thing. The people have a real interest in their recovery, for no utility company can serve the public properly unless it prospers. There were a lot of errors made by the public service corporations in former days. They suffered for them. They are not likely to make them again, for the greatest profit that a utility concern can receive is through winning and meriting public good will through the highest measure of good service.

The Red Cross Dollar Never Depreciates in Value!

From, The Nation's Business

IN the October issue of *The Nation's Business* Mr. Guy Morrison Walker has dealt with the gas situation in an article entitled, "Servants—Public and Otherwise." Wherein he emphasizes the proneness of the average individual to accept as a matter of course, the higher cost of certain phases of living, quite often non-essential luxuries, while at the same time they decry the negligible increases in public utility service prices.

"It is a strange quirk of the human mind that makes us willing to pay more for human domestic service and at the same time oppose violently higher payment for our mechanical servants. Over there in the corner of the kitchen is the gas range, working at the same old wages. We recognize that the housemaid has to have higher wages to purchase the things she needs and at the same time refuse to recognize that the cost of living for the company that produces the gas has gone up just as much under the same economic conditions."

And he particularly stresses the point of the relation the public utility bears to the economic growth of a municipality. To use his own words,—"If the people of any given community give the public utility properties fair treatment and permit them to be successful it is a good advertisement for their city and makes it possible to raise additional capital for improving or expanding service therein. If, on the other hand, the public attitude toward public utilities drives them into bankruptcy it not only deprives the people of that city of the service they have been getting, but makes it impossible for them to raise capital to furnish the service that has been destroyed by unjust treatment.

. . . If by impositions you bankrupt a public utility your people are compelled sooner or later to tax themselves to make up the deficit between what the service they have received has cost and what they have paid for it—."

For the Early Comer

THE Fifth National Hotel Men's Exposition will be held in the Grand Central Palace, New York City, the week of November 8th, 1920. This is the week preceding the American Gas Association meeting in New York.

At this hotel show is annually exhibited practically all equipment of any kind used in hotel kitchens through the country. The Consolidated Gas Company of New York always has a most interesting exhibit at this show and this year will be no exception for it is intended to specialize on such units as make it possible for a hotel or restaurant to entirely eliminate the use of a coal fired steam unit in connection with their cooking operations.

There will be exhibited gas fired coffee urns, gas fired steam tables, gas fired stock pots, small steam boilers for the use of those kitchens which demand some steam cooking, large and unusual Water Heaters of various makes which can be used to advantage in hotels and restaurants.

It is expected that a number of gas range manufacturers who specialize in hotel units will also make exhibits. Gas men who are coming to New York and who happen to arrive two or three days ahead of time will find this hotel show an interesting one to visit. Those desiring to attend can obtain such admission tickets to the show from the Hotel Division of the Consolidated Gas Company at 130 East 15th Street.

AMERICAN GAS ASSOCIATION SECOND ANNUAL CONVENTION AND EXHIBITION

Hotel Pennsylvania—November 15 20, 1920.

During the past year, the gas industry has been confronted with many and serious problems.

The Second Annual Convention of the A. G. A. will be the place where these problems will be thoroughly discussed and definite conclusions arrived at.

The gas industry is entering a period in its history where action will count for much in its future development.

Gas companies should send their brightest young men to this Convention. They are the ones who eventually must carry on and direct the development of our business and who need the inspiration and information which comes from contact with trained and experienced men in the industry.

This Convention is not for the man who knows it all, but for he who does not know it all and is anxious to learn.

Come and give us the benefit of the best thoughts in you so that the whole industry can profit from your knowledge and experience.

You owe it to yourself, your company and the gas business to be in attendance. You cannot afford to be absent.

Make your arrangements now and decide to carry back to your company and to those who cannot attend this meeting something which will be helpful to your co-workers and your company.

AMERICAN GAS ASSOCIATION SECOND ANNUAL CONVENTION AND EXHIBITION

Hotel Pennsylvania—November 15-20, 1920.

The Gas Business is coming into its own and it rests entirely with those engaged in this essential industry to see to it that it does.

Even the most skeptical gas man will realize that this industry must go forward. There is no halfway stop.

The present is better than the past ever was and the future holds out still greater promise.

The Second Annual Convention of the A. G. A. begins another period of renewed activity to meet the problems of our industry.

Every gas man who can will be there, for he cannot afford to miss this opportunity to learn what is going on in the industry, or what is being done to promote its most rapid and stable development.

The Gas Industry is here to stay and go on and it is the duty of every gas company executive and manager to have his company well represented.

A live and interesting program will be offered, so don't let anything interfere with your being present at the Hotel Pennsylvania, New York, September 15 to 20.

The Second Annual Convention and Exhibition of the American Gas Association

THE PLACE

Hotel Pennsylvania, New York, N. Y.
(Headquarters)

IT is peculiarly fortunate that the date of the Second Annual Convention comes at a time when the entire gas industry is finally awakened to the necessity for continued unity of action on its many vital and perplexing problems, the proper solution of which means so much to its future prosperity.

The keynote of the November Convention will be, THE GAS SITUATION NOW; ITS PROBLEM AND ITS FUTURE.

We see a condition unprecedented in the history of the business; with revenues inadequate to meet the continued rising costs of labor and materials and with the industry unable to compete with other lines, under the conditions, for new capital.

We have seen our industry fully alive to the unmistakable benefits to be secured from concerted effort. As witness of this recall to mind the activities of the Emergency Committee, and what it has accomplished in preparing the way for a better public understanding of the utilities' needs and the essential character of the service they render.

There are many activities of the Association which have been well started, but we have simply scratched the surface.

We must carry on. All this leads up to what is going to take place at the Convention.

Who Should Be There

The Executive Board invites every company and individual member to attend. Gas companies should be ade-

THE TIME

November 15-20, 1920
Attendance Estimated at 1000

quately represented by not only their executives and managers but should send their brightest young men to this Convention. The meeting is not altogether for the men who know it all but for those who do not know it all and are anxious to learn. The men who must eventually direct the affairs of gas companies are the ones who need the inspiration from and contact with trained and experienced men in the industry.

The Exhibition

This year the holding of the exhibit on the Roof Garden, where ample space is available for the purpose, will provide additional space on the mezzanine floor for meetings and the social functions.

There will be 112 spaces occupied with exhibits of all the latest and improved gas appliances and apparatus, as well as office labor-saving devices, and a model exhibit of modern gas lighting units, the latter contributed by manufacturer members of the Association.

The exhibition provides an opportunity for study, comparison and selection of merchandise which the gas companies will sell, and the placing of orders with the manufacturer exhibitors at that time will be appreciated by them.

The Social Feature

November in New York is an ideal month to visit this great metropolitan centre. Two entertainments will be provided,—on Monday evening, November 15, the President's Reception, followed

by a Dance and Buffet Supper, and on Wednesday evening the annual Banquet and Dance. These affairs will be held at the Hotel Pennsylvania and every arrangement will be made to the end that both occasions may be enjoyable. To insure this the large ballroom where the Exhibition was held last year has been secured for the banquet. This room with its much larger floor space than the one used at our last Convention will amply take care of all who attend the banquet.

A Golf Tournament has been arranged for, full particulars of which may be obtained at the Association Headquarters and Rest Room in the Foyer. Be sure to bring your golf clubs with you.

Hotel Reservations

Word has reached us that hundreds of reservations have already been made at the Hotel Pennsylvania, which will be the headquarters, and where all meetings and the exhibition will be held.

Make your room reservation direct to the Hotel as early as possible and in doing so state it is for the A. G. A. Convention.

The Business Program

The tentative program which follows has been prepared with the idea of providing discussion on many and varied topics of interest and value to both the large and smaller companies. Advance copies of Committee reports will be supplied to members on request and all who contemplate attending are requested to familiarize themselves with the contents of the reports and come prepared to discuss them.

TENTATIVE PROGRAM

GENERAL SESSION

Main Ball Room, Mezzanine Floor
Tuesday, November 16—Ten o'clock

Meeting called to order and Opening

Remarks....Geo. B. Cortelyou, President

Report of Membership Committee

O. H. Fogg, Secy.-Mgr.

Report of Secretary-Manager

O. H. Fogg, Secy.-Mgr.

Report of Treasurer.....Wm. H. Barthold

Address of the President..Geo. B. Cortelyou

Report of Committee on Amendments

to Constitution and By-Laws..W. J. Clark

Report of Nominating Committee and

Election of Officers

C. H. Nettleton, Chairman

Address—The Public Utility Company

in Court

Wm. L. Ransom, New York, N. Y.

Report of Committee on Time and Place,

1921 Convention

EXECUTIVE SESSION

(Only Company Member Delegates Attending)

Election of Company Members

Election of Directors

Election of 1921 Nominating Committee

Election of Committee on Resolutions

Wednesday, November 17—Ten o'clock

Address—Adjusting Ourselves to a New

Era in Business

Harry C. Spillman, New York, N. Y.

Report of General Committees

Report of Emergency Committee of the

A. G. A.....P. H. Gadsden, Chairman

Open Discussion

Thursday, November 18—Ten o'clock

Address—Post-War Tendencies as Affecting

Utilities

Wm. J. Hagenah, Chicago, Ill.

Reports of Chairmen of Sections

Report of Committee on Standard Gas

Appliance Specifications

W. T. Rasch, Chairman

Report of Committee on President's Address

Open Discussion re. Association activities

for the year 1921

Closing Remarks

ACCOUNTING SECTION

Tuesday Afternoon, November 16

Two o'clock

Report of Nominating Committee

Wm. Schmidt, Jr., Chairman

Chairman's Introductory Remarks

A. P. Post

Report of Committee—State Representatives

and Contributions to MONTHLY

J. W. Heins, Chairman

Report of Committee on Standard Classification of Accounts for Gas Corporations

W. J. Meyers, Chairman

Address—The Importance of the Accounting Department Under Commission Regulation.....Rufus C. Dawes

Wednesday Afternoon, November 17

Two o'clock

Paper—Purchasing and Storeroom Accounting.....L. H. Werner
Report of Committee on Merchandise Accounting.....W. A. Sauer, Chairman
Report of Committee on Automobile Cost Accounting...S. J. Palmer, Chairman
Paper—Fire Insurance from the Public Utility Viewpoint.....J. G. Reese
Report of Committee on Office Labor-Saving Devices...J. L. Conover, Chairman
Paper—Restoring Office Personnel of a Public Utility Company...Paul W. Herring

Thursday Afternoon, November 18

Two o'clock

Report of Committee on Uniform Accounting Nomenclature
W. H. Pettes, Chairman
Paper—Continuous Inventory of Fixed CapitalErnest Johnston
Report of Committee on Job Order Systems.....W. G. Sterrett, Chairman
Report of Joint Committee on Trade Acceptances.....L. H. Musil, Chairman
Discussion of Subjects to be Considered by the Accounting Section in 1920-1921

COMMERCIAL SECTION

Tuesday, November 16—Two o'clock

Meeting called to order and opening remarks....Charles A. Munroe, Chairman
Report of Nominating Committee and Election of Officers

F. J. Rutledge, Chairman

Paper—Present and Future Outlook for Industrial Fuel Gas Sales

H. H. Clark, Chairman,

Industrial Fuel Sales Committee

Followed by the presentation and discussion of the following subjects:

1. The Use of Gas in the Newspaper Plants of Boston...W. W. Cummings
2. The Use of Gas in Railroad Shops
Roy G. Monroe
3. The Use of Gas in Automobile and Tire Repair Shops.....H. L. Wolfe
4. The Use of Gas in Educational Institutions.....W. L. Powers
5. The Application of Gas to Core Baking.....A. A. Schuetz
6. The Application of Gas to Drying
H. M. Crawford

7. The Application of Gas to Japanning
W. J. Hampton
8. The Application of Gas to Galvanizing
D. A. Flynn

9. The Application of Gas to Internal Heating.....James F. Reynolds

10. The Application of Gas to Varnish BoilingPaul Dorchester

11. The Application of Gas to Brass Melting.....A. L. Palmer

12. The Application of Gas to Asphalt Melting.....C. H. Kallstedt

13. The Application of Gas to Forging
C. J. Wright

14. The Application of Gas in the Vitreous Enamel Industry
Chas. C. Krausse

15. The Application of Gas to the Smoking, Curing and Preparation of Meat and Fish Products
W. T. Hudson

16. The Value of Gas for Steel Treating
Frank F. Cauley

17. Converting Direct Fired Coal Ovens to Gas.....R. V. Howes

18. Report of Committee on Heating
Geo. E. Bennitt, Chairman

Sub-Committees:

Furnace Performance Standards
I. Lundgaard
Improvement of Atmospheric Burners

Jerome Brandes
Proportional Mixing.....C. C. Krausse

Recuperation and Regeneration
H. O. Loebell

Wednesday, November 17—Two o'clock

(Joint Session of Commercial and Publicity and Advertising Sections)

Report of Nominating Committee (Publicity Section) and Election of Officers

Wm. J. Clark, Chairman

Address—Keeping Oiled the Hinges on which Big Sales are Hung...Roy F. Soule

Address—What Real Sales Service Means
R. M. Searle, Rochester, N. Y.

Paper—Getting Results from Newspaper Publicity...John P. Lucas, Charlotte, N. C.

Report of Sales Development Committee
Wm. Gould, Chairman

Report of Sales Campaigns Committee
H. J. Pettengill, Jr., Chairman

Thursday, November 18—Two o'clock

Report of Committee on Compensation of Salesmen...C. M. Karshner, Chairman

Report of Committee on Filling in the
Valleys of Gas and Appliance Sales
Wm. Gould, Chairman
Report of Committee on Work Com-
pletion Schedules..G. I. Vincent, Chairman
Report of Committee on Maintenance
R. Buckminster, Chairman
Report of Committee on Gas Lighting
T. H. Piser, Chairman

TECHNICAL SECTION

Tuesday Afternoon, November 16

Two o'clock

Nominating Committee

R. C. Congdon, Chairman
Introductory Remarks by Chairman of
Section.....L. R. Dutton
Paper—Demand Limiting Motor
H. D. Hancock
Purification Committee—Results to Date
C. H. Stone, Chairman
Address—The Use of Concrete at Gas
Plants.....Col. H. C. Boyden

MANUFACTURING SESSION

Wednesday Afternoon, November 17

Two o'clock

Development in Carbonization Methods—
Coke Division
Low Temperature Carbonization
Producers as Applied to Carbonizing
Units.....J. P. Haftenkamp, Chairman
Gas Works Auxiliaries
C. N. Chubb, Chairman
Refractory Materials—Particularly Re-
ferring to Water Gas Generators
W. H. Fulweiler, Chairman
Paper—Coal Sulphur and Its Conversion
in the Gas Retort
Dr. A. R. Powell, Bureau of Mines
Gas Chemists' Handbook—Revised Edition
E. C. Uhlig, Chairman

DISTRIBUTION SESSION

Cast Iron Pipe Standards
Walton Forstall, Chairman
Electrolysis Mitigation
Prof. L. A. Hazeltine, Chairman
Testing, Handling and Minor Repairing
of Dry Gas Meters
W. A. Castor, Chairman
Deposits in Meters
O. A. Morhous, Chairman

Thursday Afternoon, November 18

Two o'clock

Gas Oil Situation to Date..W. H. Fulweiler
Disposal of Waste from Gas Plants
L. J. Willien, Chairman
A Recording Gas Calorimeter
H. N. Packard
Standard Nomenclature for the Gas
Industry—Progress to Date
O. E. Norman, Chairman

MANUFACTURERS SECTION

Monday, November 15—10.30 A. M.

Address of Chairman....W. Griffin Gribbell
Report of Secretary.....W. W. Barnes
Report of Chairman—Membership Com-
mittee.....Wm. M. Crane
Report of Chairman—Nominating Com-
mittee.....Wm. M. Crane
Report of Chairman—Illustrated Lec-
ture Committee.....Geo. S. Barrows
Report of Chairman—Division of Meter
Manufacturers.....Donald McDonald
Report of Chairman—Division of Gas
Range Manufacturers....Wm. M. Crane
Report of Chairman—Division of Water
Heater Manufacturers.....H. J. Long
Report of Chairman—Division of Office
Labor-Saving Devices....H. B. Lohmeyer
Report of Chairman—Division of Heat-
ing Appliance Manufacturers
Geo. S. Barrows
Report of Chairman—Division of Indus-
trial Appliance Manufacturers
S. Tully Willson
Report of Chairman—Division of Light-
ing Appliance Manufacturers
J. P. Conroy
Report of Temporary Chairman—Divi-
sion of Apparatus and Works Manu-
facturers.....J. S. DeHart, Jr.
Report of Temporary Chairman—Divi-
sion of Supply Manufacturers..R. Mueller
Report of Temporary Chairman—Divi-
sion of Accessories Manufacturers
B. Ryan
Discussion—Future Activities
Election of Officers
Installation of Officers
Adjournment

In performance of its first duty, the American Red Cross, through its millions of workers, furnished 387,000,000 surgical dressings and garments to the hospitals and camps during the great World War.

\$100.00 Prize Offer For the Best Slogan of the Gas Industry

The purpose of this contest is to obtain a short, terse slogan for the gas industry.

We do not want a definition of gas, nor an advertising catch word.

We want a slogan which will convey in a few words, the essential relationship of the gas company to the public, to whom it furnishes an indispensable service.

You who are in the gas business are best able to write such a slogan because you know of the various factors which enter into this relationship.

You know, for instance, that your company stands for service—dependable, stable, trustworthy service.

You know that gas service is available to all who ask for it, twenty-four hours a day, year in and year out.

And you know, furthermore, that the industry behind this service belongs to the American people because it is owned by the American people.

The shorter and snappier the slogan, the better. Make every word count.

Contest Rules

The contest is open to everyone in the gas business.

It opens November 1st and closes January 1st, 1921.

Contestants may send in more than one slogan.

In case of ties, the full amount of the prize will be given to each tying contestant. No entry shall be considered a tie unless consisting of the same words and arrangement of words as some other entry which shall have been submitted.

The judges of the contest are Geo. B. Cortelyou, Henry L. Doherty, Philip H. Gadsden, Oscar H. Fogg and Charles A. Munroe.

The prize slogan chosen by the judges becomes the property of the American Gas Association, to be given to the gas industry.

The final award will be announced as early as possible after the close of the contest.

—○— Remember the Red Cross! —○—

500 B. t. u. Standard for Baltimore

THE Public Service Commission of Maryland on September 30 issued an order, of which the following is an extract:

ORDERED: (1) That from and after October 1st, 1920, and during the period that this order shall remain effective as hereinafter provided, the Consolidated Gas, Electric Light & Power Company of Baltimore be and it is hereby authorized and permitted to furnish gas of a monthly average total heating value of not less than 500 B. t. u., with not less than 490 B. t. u. nor more than 520 B. t. u. at any time, measured in accordance with the requirements of the Commission's Order No. 4546 entered in Case No. 1519 on November 25th, 1918, and charge for such gas so furnished at the rates prescribed by said Order No. 4546.

(2) That this order shall become effective on October 1st, 1920, and shall continue in effect until January 1st, 1922, unless earlier modified or changed by the Commission, and thereafter until the further order of this Commission in the premises; the Commission hereby expressly reserving the right to make such change or modification herein as may at any time be deemed just and proper.

At the present time, the standard for the State of Maryland, with the exception of the City of Baltimore, is 600 B. t. u. and we are informed that the Commission contemplates holding a conference at an early date for the purpose of considering a uniform standard for the entire state.

A Plea for Gasoline Conservation

R. L. WELSH, general secretary and counsel of the American Petroleum Institute, recently addressed a communication on the subject of gasoline conservation to 5,000 members of the Society of Automotive Engineers.

While admitting that no reasonably well-informed man likes to make prediction about the oil business, Mr. Welsh says that the logic of the situation is such that automotive engineers should plan to use and conserve the present day motor fuels.

"The only fuels possibly available aside from the present day motor fuels," says Mr. Welsh, "are kerosene and perhaps a distillate similar to the fuel which is used in Diesel engines, that is, something approximating gas oil.

"Gas oil and kerosene are tending to become as scarce as gasoline. At the present time many gas companies in the United States are in distress for gas oil. It has more than doubled in price in a comparatively short time."

According to Mr. Welsh, the demand for kerosene has been so great that the tank wagon market price of kerosene throughout the country is approximately two-thirds of the tank wagon market price of gasoline. A short time ago it was about one-half.

"This increasing demand for these heavier distillates will apparently continue and must be met," says he. "We must never forget that the kerosene lamp is a long way from being supplanted, and that the demand for gas oil will continue to be very great.

"The price of kerosene and gas oil is

rising more rapidly than the price of gasoline. With the great demand for these two products, it is difficult to see where the kerosene is going to come from to enlarge the motor fuel supply. If the kerosene or gas oil is available, it seems obvious that by efficient refining methods it will be cracked into gasoline approximating in its boiling point the ordinary grades of motor fuel in use throughout the country. If you design your engines to use these two heavier fuels, it looks as though the oil industry were going to beat you to it by cracking both of them and making gasoline out of them."

In making a plea to motor owners to conserve gasoline Mr. Welsh says that in 1919 we consumed 375,000,000 barrels of crude oil. Since the first of August, 1919, and down to the first of March, 1920, we have been consuming at the rate of 436,000,000 barrels per annum, and we have been producing at the rate of 402,000,000 barrels per annum. This shows an excess of consumption over production of 34,000,000 barrels.

The following remedies for the present fuel shortage are suggested by Mr. Welsh:

First, the Government of the United States must co-operate with the oil business and with the automotive industry at home and abroad if the gasoline problem is to be solved.

Second, the greatest possible efficiency must be gotten by the automotive industry and by the consumer from motor fuel or the problem will not be solved.

Third, the oil industry must be more efficient and must get more gasoline from each barrel of crude.

ACCOUNTING SECTION

A. P. POST, Chairman

H. W. HARTMAN, Acting Secretary

A. L. TOSSELL, Vice-Chairman

MANAGING COMMITTEE — 1920

At Large

ALDEN, CHARLES A., Boston, Mass.
BRUNDAGE, H. M., New York, N. Y.
ERICKSON, HALFORD, Louisville, Ky.
PETTES, W. H., Newark, N. J.
POST, A. P., Philadelphia, Pa.
REES, RICHARD, (Mfr.) Kalamazoo, Mich.
SCHMIDT, Wm., Jr., Baltimore, Md.
SCORELL, E. C., Rochester, N. Y.
TOSSELL, A. L., Chicago, Ill.

Representing Affiliated Societies

ARMSTRONG, J. J., Toronto, Can. (Canada)
CHAPIN, C. H. M., New York, N. Y. (Empire State
G. & E. Ass'n.)
EATON, H. M., Detroit, Mich. (Michigan)
HAASE, EWALD, Milwaukee, Wisc. (Wisconsin)
HOUGHTON, W. R., Los Angeles, Cal. (Pacific Coast)
HOV, CHAS. W., Glassboro, N. J. (New Jersey)
JAMES, P. M., Aurora, Ill. (Illinois)
MAYNARD, H. B., Waterloo, Iowa. (Iowa)
McCABE, J. B., Dallas, Texas. (South Central)
NORTON, W. F., Nashua, N. H. (N. E. Gas Eng.)
PORTER, EDW., Philadelphia, Pa. (Pennsylvania)
SHEARON, E. F., Hammond, Ind. (Indiana)
SPENCE, GEO. H., N. C.

CHAIRMEN OF SECTION COMMITTEES ORGANIZED TO DATE

Automobile Cost Accounting—S. J. PALMER, Chicago, Ill.
Merchandise Accounting—W. A. SAUER, Chicago, Ill.
Job Order Systems—W. G. STERRETT, Chester, Pa.
Vice-Chairman, F. M. JAMES, Aurora, Ill.
Office Labor Saving Devices—J. L. CONOVER, Newark,
N. J.
Papers—H. M. BRUNDAGE, New York, N. Y.

State Representatives—J. W. REINS, Philadelphia, Pa.
**Uniform Classification of Accounts and Form of Annual
Report to Public Service Commissions**—W. J.
MEYERS, New York, N. Y.
Uniform Accounting Nomenclature—W. H. PETTES,
Newark, N. J.

Motor Fuel Manufacturing and Accounting

By F. H. PATTERSON

AMONG the industries which owe their inception to the exigencies arising out of the war, the manufacture and distribution of motor fuel by gas companies is a notable example. In the first instance plants were built for the extraction of light oil for use in making high explosives, and with the termination of hostilities several companies converted these facilities to their present use.

It is the purpose of this article to describe an accounting plan used in connection with the Motor Fuel Production Department of the Rochester Gas and Electric Corporation, Rochester, N. Y., with the object of inviting criticism and suggestions concerning the method from interested persons as well as to serve as an example to assist others engaged in this branch of the gas industry, to the end that true costs and profits may be ascertained.

To enlighten those who are unfamiliar with Motor Fuel Manufacture, and for the purpose of stating definitely the process as employed by this Corporation, a resumé of the process used is given first, followed by the accounting plan.

Manufacturing Process

This motor fuel industry is built upon two operations: First, the absorption of the crude light oil vapors from coal gas and their extraction from the absorbing medium in the form of crude light oils. The second operation is the rectifying of these crude light oils thereby producing a finished product ready to be sold as motor fuel.

The first operation is carried on in standard tower scrubber equipment, the gas in its upward course being met by a spray of wash oil or gas oil. This wash oil or gas oil, with its entrained light oil

vapors, is then subjected to a steam distilling operation in a standard Koppers still, the crude light oil being collected in tanks while the distilled wash oil is returned to the scrubbing system. This is a continuous process and can be carried on indefinitely with the slight addition of wash or gas oil to replace the lighter portions which might be driven off in the steam still operation.

In the second operation the crude light oil is conveyed to a lead-lined tank, a certain weight of sulphuric acid is injected, and the entire mass is recirculated and thoroughly washed. The object of this operation is to bring down the heavier portions of the crude light oil. The sulphuric acid sludge is then removed and the light oil is washed with water. This is followed by a washing with caustic soda to neutralize any acid which may not have been entirely removed by the water, and the mass is

again washed with water. Each batch is then tested for neutrality because it must be neither acid nor alkaline at this point. The material is then removed to an intermittent batch still supplied with direct and indirect steam heating. From this last still the vapors are conveyed to a tubular condenser, then through a water separator to a storage tank.

The rectified light oil is then mixed with an equal volume of gasoline and the entire mass is agitated to obtain a homogeneous mixture.

The Account Classification

A classification of accounts has been evolved, dividing the costs into two branches, *vis*: Light Oil Production Expenses and Rectified Light Oil Production Expenses, embracing in addition revenue, distribution, general overhead, fixed charges and inventory accounts as follows:

I.—LIGHT OIL PLANT—PRODUCTION EXPENSES.

Acct. No.	Account Name
1	Productive Labor
	Raw Materials:
2	Wash Oil Used
3	B. t. u. Loss
4	Gas Volume Loss
5	Steam Used
6	Water Used
	Department Overhead Expenses:
7	General Works Expense
8	Salaries
9	Maintenance Labor
10	Maintenance Materials
11	Lubricants
12	Taxes on Plant
13	Insurance on Plant
14	Depreciation
15	Light Oil Produced—Cr.

II.—RECTIFIED LIGHT OIL PLANT—PRODUCTION EXPENSES.

Acct. No.	Account Name
16	Productive Labor
	Raw Materials:
17	Sulphuric Acid Used

18,	Caustic Soda Used
19	Steam Used
20	Water Used
21	Light Oil Used
Department Overhead Expenses:	
22	Shipping Labor
23	Shipping Supplies
24	Maintenance Labor
25	Maintenance Materials
26	Depreciation
27	Motor Fuel Produced—Cr.
28	Residue Produced—Cr.

III.—INCOME AND PROFIT AND LOSS ACCOUNTS

Acct. No.	Account Name
Revenues:	
29	Motor Fuel Sales—Less Allowances (Customers)
30	Motor Fuel Sales—Less Allowances (Interdepartment)
31	Rectified Light Oil Sales—Less Allowances
32	Lubricating Oil and Alcohol Sales—Less Allowances
Expenses:	
33	Cost of Sales (a) Customers (b) Interdepartment (c) Rectified Light Oil (d) Lubricating Oil, etc.
34	Delivery Expense
35	Salaries—Sales Department
36	Sales Office Expense
37	Soliciting
38	Advertising
39	Bad Debts
40	Shrinkage
41	Service Station Operation
42	Interest

IV.—INVENTORY ACCOUNTS

Acct. No.	Account Name
50	Light Oil Stock
51	Motor Fuel Stock
52	Wash Oil
53	Sulphuric Acid
54	Caustic Soda
55	Gasoline
56	Residue

Accounting Statements and Explanation

Each month the Superintendent of the Motor Fuel Plant furnishes a statement to the Auditing Department, showing the quantities of materials used during the month; the state of the inventories as of close of the month and other pertinent information. Exhibit "A" — Motor

Fuel Plant Report — is an illustration of the data supplied.

From this report certain necessary journal entries are prepared, consisting, chiefly, of the transfer to the Motor Fuel Plant of values of steam, water, B. t. u. and gas loss, from the Gas Works, which bore these expenses in the first instance.

From this report, also, the Exhibit "B" — Motor Fuel Plant Inventories statement is prepared as to quantities of the various stocks of materials, while the values thereof are taken from the ledger inventory accounts.

The Exhibit "B" — Motor Fuel Plant Inventories Statement forms the basis of journal entries for the various materials used during the month. In addition journal entries are required for transferring the cost of light oil made during the month from the Light Oil Production Expense to the Light Oil Inventory Account No. 50; similarly, a transfer of the cost of making motor fuel from Motor Fuel Production Expense to the Motor Fuel Inventory Account No. 51. In addition, the gasoline used to mix with the motor fuel to produce the

finished product motor fuel, otherwise known by the trade name Bengas, must be transferred by journal entry from the Gasoline Stock to the Motor Fuel Stock.

Interest, depreciation and insurance and the sales for the month are set up by journal entry also.

The other elements of expense entering into the accounts, consisting of labor, material and miscellaneous expenses, are introduced through the usual accounting records.

When all postings have been completed the following statements are prepared:

- 1—Light Oil Production Cost Statement—Exhibit "C."
- 2—Rectified Light Oil Production Cost Statement—Exhibit "D."
- 3—Income and Profit and Loss Statement—Exhibit "E."

EXHIBIT "A." MOTOR FUEL PLANT REPORT.

(Furnished by Superintendent of Motor Fuel Plant.)

Acct. No.	⁵⁰ Gals.	⁵¹ Gals.	⁵² Gals.	⁵³ Lbs.	⁵⁴ Lbs.	⁵⁵ Gals.	⁵⁶ Gals.
Material	Light oil	Motor fuel	Wash oil	Sulphuric acid	Caustic soda	Gasoline	Residue
On Hand	25,000	16,000	None	19,000	None	21,000	None
Transferred							
Inward	None	185,000	41,000				60,000
Purchased	95,000	None		102,000	30,000	174,000	
Produced	200,000	220,000					
Total	320,000	421,000	41,000	121,000	30,000	195,000	60,000
Sold	None	330,000					
Used	310,000	70,000	41,000	92,000	20,000		
Transferred							
Outward						185,000	60,000
Total	310,000	400,000	41,000	92,000	20,000	185,000	60,000
On hand	10,000	21,000	None	29,000	10,000	10,000	None
Coal gas made	650,000	M cu. ft.		Steam Used:			
Coal gas scrubbed	600,000	M cu. ft.		Divided as to Light Oil		6,500,000 lbs.	
Inlet B. t. u.	579			and Rectified Light Oil		8,300,000 lbs.	
Outlet B. t. u.	563			Water Used:			
B. t. u. Loss	16			Divided as to Light Oil		5,000,000 gals.	
B. t. u. Loss	2.8			and Rectified Light Oil		4,400,000 gals.	
Water Gas made	700,000	M cu. ft.					

Note: From this statement and the ledger inventory accounts Exhibit "B" is prepared.

EXHIBIT "B."

MOTOR FUEL PLANT INVENTORIES.

(Stated in this form for convenience in explaining sources and disposition of elements of each.)

Account No. 50 Light Oil—Gallons				Source and disposition
	Quantity	Rate	Amount	
On hand	25,000	.0750	1,875.00	From ledger account.
Purchased	95,000	.0743	7,063.00	From vendors' invoices through accounts payable.
Produced	200,000	.1023	20,470.00	From Exhibit "C"—Light Oil Production Cost.
Totals	320,000	.0919	29,408.00	
Used	310,000	.0919	28,500.00	To Exhibit "D"—Light Oil Used.
On hand closing	10,000	.0919	908.00	

Account No. 51 Motor Fuel—Gallons				Source and disposition
	Quantity	Rate	Amount	
On hand	16,000	.1540	2,464.30	From ledger account.
Transferred inward	185,000	.23	42,550.00	From Account 55—Gasoline (below).
Produced	220,000	.1557	34,260.00	From Exhibit "D"—Rectified Light Oil Production Cost.
Totals	421,000	.1883	79,274.30	
Sold	330,000	.1883	62,139.00	To Exhibit "E"—Cost of Sales—Customers.
Used	70,000	.1883	13,181.00	To Exhibit "E"—Cost of Sales—Interdepartment.
Totals	400,000	.1883	75,320.00	
On hand closing	21,000	.1883	3,954.30	

Account No. 52 Wash Oil—Gallons				Source and disposition
	Quantity	Rate	Amount	
On hand	None			
Purchased	41,000	.085	3,300.00	From vendors' invoices through accounts payable.
Total	41,000	.085	3,300.00	
Used	41,000	.085	3,300.00	To Exhibit "C"—Wash Oil Used.
On hand closing	None			

Account No. 53 Sulphuric Acid—Lbs.				Source and disposition
	Quantity	Rate	Amount	
On hand	19,000	.0233	443.90	From ledger account.
Purchased	102,000	.024	2,448.00	From vendors' invoices through accounts payable.
Total	121,000	.0239	2,891.90	
Used	92,000	.0239	2,200.00	To Exhibit "D"—Sulphuric Acid Used.
On hand closing	29,000	.0239	691.90	

EXHIBIT "B."—(Continued)

Account No. 54
Caustic Soda

	Quantity	Rate	Amount	Source and disposition
On hand	None			
Purchased	30,000	.0340	1,020.00	From vendors' invoices through accounts payable.
Total	30,000	.0340	1,020.00	
Used	20,000	.0340	680.00	To Exhibit "D"—Caustic Soda Used.
On hand closing	10,000	.0340	340.00	

Account No. 55
Gasoline—Gallons

	Quantity	Rate	Amount	Source and disposition
On hand	21,000	.23	4,830.00	From ledger account.
Purchased	174,000	.23	40,020.00	From vendors' invoices through accounts payable.
Total	195,000	.23	44,850.00	
Transferred outward	185,000	.23	42,550.00	To Account 51—Motor Fuel Account above. Gasoline mixed with rectified oil to complete the finished product as explained under "Manufacturing Process."
On hand closing	10,000	.23	2,300.00	
On hand	None			

Account No. 56
Residue—Gallons

	Quantity	Rate	Amount	Source and disposition
Transferred inward	60,000	.035	2,100.00	From Exhibit "D"—Residue Produced Cr.
Total	60,000	.035	2,100.00	
Transferred outward	60,000	.035	2,100.00	To Gas Works to mix with oil tar.
On hand closing	None			

Note: This statement is prepared from the Motor Fuel Plant Report, Exhibit "B," as to quantities, and from the ledger inventory accounts as to values.

EXHIBIT "C."

LIGHT OIL PRODUCTION COST STATEMENT.

Acct. No.	Account name	Quantity	Price	Per	Amount	Cost per gallon of Product
1	Productive Labor				\$1,800.00	.0090
<i>Raw Materials:</i>						
2	Wash Oil Used	41,000	.0805	Gal.	3,300.00	.0165
3	B. t. u. Loss	87,000	.0310	Gal.	2,700.00	.0135
4	Gas Volume Loss	6,000,000	.2333	M Cu. ft.	1,400.00	.0070
5	Steam Used	8,300,000	.4578	M Gals.	3,800.00	.0190
6	Water Used	5,000,000	.0160	M Gals.	80.00	.0004
<i>Overhead Expenses:</i>						
7	General Works Expense				870.00	.0044

8	Salaries				1,200.00	.0060
9	Maintenance Labor				1,800.00	.0090
10	Maintenance Materials				1,200.00	.0060
11	Lubricants				20.00	
12	Taxes on Plant				900.00	.0045
13	Insurance on Plant				400.00	.0020
14	Depreciation				1,000.00	.0050
Total Production Cost		200,000	.1023	Gal.	\$20,470.00	.1023
15	Light Oil Produced—Cr.	200,000	.1023	Gal.	20,470.00	.1023
Light Oil Produced		200,000 Gallons.				

Note: The total production cost shown above is carried to the inventory account No. 50—"Light Oil Stock" on Exhibit "B"—"Motor Fuel Plant Inventories" by journal entry.

EXHIBIT "D."
RECTIFIED LIGHT OIL PRODUCTION COST STATEMENT.

Acct. No.	Account name	Quantity	Price	Per	Amount	Cost per gallon of Product
16	Productive Labor				570.00	.0025
<i>Raw Materials:</i>						
17	Sulphuric Acid Used	92,000	.0239	Lb.	2,200.00	.0100
18	Caustic Soda Used	20,000	.0340	Lb.	680.00	.0031
19	Steam Used	6,500,000	.4578	M Lbs.	2,975.00	.0135
20	Water Used	4,400,000	.0160	M Gals.	70.00	.0004
21	Light Oil Used	310,000	.0919	Gal.	28,500.00	.1295
<i>Overhead Expenses:</i>						
22	Shipping—Labor				90.00	.0004
23	Shipping—Supplies				825.00	.0038
24	Maintenance—Labor				200.00	.0009
25	Maintenance—Materials				50.00	.0003
26	Depreciation				200.00	.0009
Total Production Cost		220,000	.16	Gal.	36,360.00	.1653
27	Rectified Light Oil Produced—Cr.	220,000	.1557	Gal.	34,260.00	.1557
28	Residue Produced—Cr.	60,000	.035	Gal.	2,100.00	.0096

Note: The total of Account No. 27—"Rectified Light Oil Produced—Cr." above is carried to the inventory Account No. 51, "Motor Fuel Stock" on Exhibit "B"—"Motor Fuel Plant Inventories" by journal entry.

The total of Account No. 28—"Residue Produced—Cr." is carried to the inventory Account No. 56—"Residue Stock" on Exhibit "B" also, by journal entry.

The Red Cross is "Still the Greatest Mother in the World." As necessary in peace as war. Make it your Red Cross again, by answering the Fourth Roll Call, November 11-25, 1920.

EXHIBIT "E."
INCOME AND PROFIT AND LOSS STATEMENT.

	Sales			Cost of sales			Per gal.
	Quantity	Av. price	Amount	Av. price	Amount	Gross profit	
Motor fuel sales							
Customers	330,000	.25	82,500.00	.1883	62,139.00	20,361.00	
Interdepartment	70,000	.24	16,800.00	.1883	13,181.00	3,619.00	
Rectified Light Oil	0				0	0	
Lubricating Oils, etc.	4,000	.20	800.00	.15	600.00	200.00	
			100,100.00		75,920.00	24,180.00	.0605
Selling and General Expenses:							
Delivery Expense						5,000.00	.0125
Soliciting						2,500.00	.0063
Advertising						3,000.00	.0075
Motor Fuel Shrinkage						1,000.00	.0025
Service Station Expenses						800.00	.0020
Salaries						400.00	.0010
Office Expense						180.00	.0004
Interest on Investment						4,000.00	.0100
Total						16,880.00	.0422
Net Surplus						7,300.00	.0183

Conclusion

The balance sheet accounts of this enterprise are an integral part of the assets and liabilities of the whole company and therefore cannot very well be segregated for inclusion in the monthly statements.

The figures used, while approximating the actual, are fictitious. The idea sought to be conveyed is the accounting process deemed necessary to reflect the results of operation, rather than the profit possibilities and efficiency of conducting the enterprise.

November 11-25—Red Cross Roll Call!

Discussion of Accounting Section Papers and Reports

A MEETING of the Managing Committee of the Accounting Section was held at Association Headquarters, September 22nd to discuss final program for the second annual sessions of the Section to be held in November.

Certain changes in arrangement of the sessions were approved which have been incorporated in the complete program for the Convention appearing on another page of this issue.

The Committee are particularly

anxious that the sessions this year will not only provide a program of interest to all the members but that they shall be instrumental in bringing about a wider acquaintance among Accounting men in the industry and a full discussion of their common problems.

So that the members will be in a position to take an active part in the discussion at the Convention the present administration is endeavoring to have all reports and papers available in pamphlet

(Continued on page 711)

ADVERTISING SECTION

GEORGE WILLIAMS, Chairman

CHAS. W. PERSON, Secretary

M.-C. ROBBINS, Vice-Chairman

MANAGING COMMITTEE

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ROBBINS, M. C., New York, N. Y.
ROPER, GEO. D., Rockford, Ill.
RUTLEDGE, F. J., Philadelphia, Pa.
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Representing Affiliated Societies

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CARRAWAY, LEAKE, Norfolk, Va. (Southern)
FRANKLIN, S. J., Millville, N. J. (New Jersey)
FUGATE, FRANK, Detroit, Mich. (Michigan)
HIGGINS, A. A., Providence, R. I. (New England)
JASPERSON, R. O., Chicago, Ill. (Wisconsin)
LESTER, F. M., Chicago, Ill. (Illinois)
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MARTIN, E. H., Des Moines, Ia. (Iowa District)
MULHOLLAND, S. E., Fort Wayne, Ind. (Indiana)
ROLSTON, R. J., Philadelphia, Pa. (Pennsylvania)

Have You Forgotten the Meter?

THE A. G. A. advertisement on the gas meter, reproduced in this issue, again brings up the question: "What are you doing to create consumer confidence in this all-important device?"

Is it possible that you are so busy with other matters — coal, oil, labor, rates — that you have forgotten the meter and have neglected to tell some much-needed truths about it? How about the meter complaints that come into your office daily? Are you ignoring them or are you endeavoring to counteract them by saying a good word for the meter on posters, bill stickers or through paid space in the daily press?

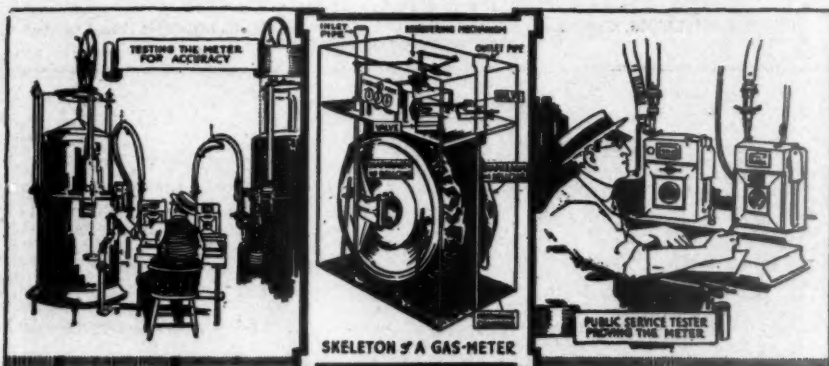
The meter needs all the friends it can recruit, and it needs them all the time. If you are losing sight of this fact, you have only to count the meter knockers and their converts to convince you that the situation demands constant and persistent educational publicity.

At Norfolk, Virginia, recently, a whole campaign was devoted to the meter, running over a period of two weeks. After considerable newspaper publicity, the local gas company selected two store windows in the busiest section of the city and completely dismantled a meter, strew-

ing the one hundred and twenty odd pieces comprising the meter over the window floor. Each piece was tagged with its proper name and function.

The company advertised through show cards and newspapers that on a certain hour on a Saturday evening, the meter would be reassembled in the presence of the general public, proved by the city officials and placed in operation in the window. On the night stated, a considerable crowd was attracted and a number of men took their stand where they could readily see the process and stood there throughout the entire procedure, which lasted approximately three hours. The equipment was so arranged that those standing on the sidewalk, in the doorway, or inside the room could watch the entire process of reassembling. Two of the company's meter shop men were placed in the window to perform the work and at its completion the city meter inspector proved the meter and placed the city seal on it. During the demonstration, and also before and after, there was distributed some three thousand dial cards entitled "How to Read Your Gas Meter," as well as a circular describing the opera-

(Continued on page 688)



Your Gas Meter is More Accurate Than Your Watch

Put one hundred of the best watches against one hundred gas meters in a crucial test for accuracy, exposed to the same varying conditions of heat, cold, humidity, and the meters will win out every time.

All things considered, the gas meter is one of the most accurate measuring instruments in use today.

Like the registering turnstile in baseball parks, railroad stations and fair grounds, the meter will not operate unless something passes through it. The mechanism is not set in motion and the indicator hands cannot move except as more or less gas passes through the meter and makes them move.

Before a meter is set in your premises, it is thoroughly tested and proved for correct registration by your gas company, or, in certain sections of the country, by meter inspectors employed by the city or state. These inspectors are your trusted representatives and they place an official seal upon the meters, thus certifying to their accuracy.

It is interesting to know that the original mechanical principles adopted in 1844 for the correct measurement of gas still persist. Hundreds of inventors have endeavored to get something better, but they have improved on details only. Today the meter stands as the survival of the fittest. If a more perfect device could be obtained, your gas company would promptly adopt it.

(Insert name of your Company here)

MEMBER OF THE AMERICAN GAS ASSOCIATION



Use this advertisement in connection with No. 8, shown on the opposite page.

To obtain the best results, publish this, (No. 4) first and follow it in a day or two, or the same week, by No. 8.



That Little Black Box in Your Home ~ ~ ~

Do you ever think of your gas meter as an open book in which your account with this company is kept? That is exactly what it is. It is placed in your home so that you may check the amount of your purchase of gas and keep track of any increase or decrease in the use of this household necessity.

Read your meter yourself and be convinced that you are getting what you pay for. It is easy to do if you follow these instructions:

Get from your last gas bill the date on which your meter was read the last time. On the same day of the current month, or the day the meter reader calls, look at your meter dials and do three things:

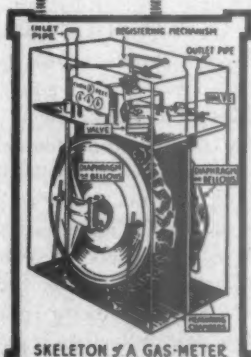
First—Ignore the small dial at the top. It is used only in tests.

Second—Reading from left to right, put down the smaller of the two figures next to the hand on each large dial. On the dials shown above these are 516.

Third—Add two ciphers to the figures taken from the dial (which makes in this case 51600) and from these figures subtract last month's meter reading as shown on your last gas bill. The result will be the cubic feet of gas used during the month.

(Insert name of your Company here)

MEMBER OF THE AMERICAN GAS ASSOCIATION



SKELTON OF A GAS-METER



Eighth of a series of twelve "good will" advertisements now being prepared for member companies. Price of series complete with matrices in either three or four-column newspaper width, \$36.00. Price of three-column electrotypes, \$48.00. Orders for single advertisements accepted at \$3.00 per matrix and \$4.00 per electrotpe.

(Continued from page 685)

tion of the meter. According to E. G. Holzer, of the City Gas Company of Norfolk, the exhibition was a great success.

Two advertisements on the gas meter have been prepared by the A. G. A. for the use of its member companies. The first one, No. 4 in the series, is entitled, "Your Gas Meter is More Accurate Than Your Watch," and it has secured some excellent publicity from more than one hundred companies who have already ordered it in matrix or electrotype form. The second advertisement, shown in this issue, is No. 8 of the series and we are asking our member companies to order, if they have not already done so, the former advertisement on the meter and use it in connection with this second advertisement. Both advertisements should be published as close together as possible, preferably a day or two apart, or at least the same week.

In connection with this latest advertisement the remark is often made: "Why tell people how to read their meters? They won't do it."

Our answer to this is the answer made to a similar question by Charles M. Cohn, vice-president of the Consolidated Gas, Electric Light & Power Company, of Baltimore, who said as far back as 1909:

"We are all, in a sense, children when we act without thinking, and so it is with many belligerent and uninformed gas consumers. The idea that the gas meter is a swindling device which records far beyond the actual consumption of gas, and by some thought to be a perpetual motion machine that works day and night, whether the gas is used or not, is being rapidly dislodged by the intelligent

and efficient work of progressive gas companies.

"In the last decade they have been advising gas consumers to *read their meters*—to regard the meter as an open book in which their account is kept. Here is a fact so obvious that for years it was regarded as being unnecessary to dwell upon. This suggestion has, after all, a reflex rather than a direct action in bringing about increased contentment among the consumers.

"The hammering home of this suggestion, apparently as unnecessary to make as that two and two make four, has caused only a very small percentage of gas consumers to read their meters regularly. It has been on the part of the consumer, rather the knowledge of the willingness of the company to have the meters read than the actual reading that has given confidence in the mechanical honesty of the meter. . . . As a matter of fact, the average gas consumer has neither the time nor the inclination to be educated as to the many helpful details of the gas business, but he does like the assurance that earnest effort is being made to keep the service up to the highest practical standard and maintain the rates upon the lowest business basis."

As Mr. Cohn points out, it is "rather the knowledge of the willingness of the company to have the meters read than the actual reading that has given confidence in the mechanical honesty of the meter," and the most effective way to evince that willingness is to use paid space in the public press.

Order these two excellent advertisements on the meter and put them to work for you immediately.

The resources of the American Red Cross represent the
SERVICE PLEDGES of American citizens—dollar
for dollar.

TO GAS CONSUMERS

Of New Haven and Vicinity!

On account of the greatly increased cost of practically everything entering into the manufacture and distribution of gas, the New Haven Gas Light Company faces the necessity of obtaining increased revenue.

The big items making up the cost of gas are gas oil, gas coal, labor and taxes, and each of these has largely increased in cost of late.

Taxes thus far in 1920 total \$186,132.75, and amount to practically 10 cents per 1000 cubic feet of gas sold.

During the last six months the price of gas oil has increased from 6 cents to 15 cents per gallon. Gas coal has risen from \$6.39 per gross ton alongside at the gas works to an average over the last two months of \$11.18.

To partially meet these increased expenses, on and after August 1st, 1920, all customers will be charged a yearly Service Charge for each meter, to be added to the monthly gas bill of the regular meters, and collected quarterly in advance in the case of the prepayment meters.

The Rate Schedule of the Service Charge:

Size of Meter 2 and 3 Lights	Yearly Service Charge	Cost per month of Service Charge	Size of Meter No lights	Yearly Service Charge	Cost per month of Service Charge
12 "	\$4.00	\$.33	100 "	\$12.00	\$1.00
18 "	5.00	.42	125 "	13.00	1.08
24 "	6.00	.50	150 "	14.00	1.17
30 "	7.00	.58	175 "	15.00	1.25
36 "	8.00	.67	200 "	16.00	1.33
42 "	9.00	.75	225 "	17.00	1.42
48 "	10.00	.83	250 "	18.00	1.50
54 "	11.00	.92	275 "	19.00	1.58
60 "	12.00	1.00	300 "	20.00	1.67
66 "	13.00	1.08			
72 "	14.00	1.17			
78 "	15.00	1.25			

*The size of meter is stamped on a badge in plain sight on the outside of the meter and does not refer to the number of lights or burners on the premises of the consumer. About 50,000 out of a total of 80,000 meters are of the 2 light and 3 light sizes. The lowest rate therefore of \$4.00 per year applies to the great bulk of the consumers.

It is estimated that the application of the above schedule of Service Charges will increase the revenue of the Company by about \$300,000. This is far short of the increased expenses. If, therefore, the present conditions continue an increase in the price of gas per 1000 cubic feet must be made in addition to the Service Charge. It is hoped that the present excessive costs—especially of oil and coal will not continue and that therefore an increase in the price of gas may later be smaller than present conditions call for. The Company has therefore determined to wait for a time before taking further action in order that the consumers may have the benefit of lower prices if such can be obtained within a reasonable time.

A Service Charge being new to New Haven requires an explanation. It is a fixed yearly charge per meter to cover in part a number of expenses incurred by the Gas Company for each meter installed ready to serve the consumer. These expenses consist in part of cost of meter reading, keeping the accounts, billing, collecting, maintenance and repairs of meter and service pipe and fixed charges, taxes and depreciation thereon, a portion of the office and general expense, setting, removing and testing meters, complaints and gratuitous work.

These expenses are borne by the Company whether the meter uses much or little gas or none at all.

It is fair and just therefore that each meter should pay these charges regardless of the amount of gas used.

If the consumer, for whose sole use the Gas Company incurs these expenses, does not use the facilities sufficiently to pay them through the amount of gas used, these charges are borne by other consumers who use more gas—resulting in unjust discrimination. It should be noted that a small gas consumer is not necessarily a poor man. The small consumer is found among the houses of the wealthy, and in hotels, theatres, public buildings, and stores, wherever electricity may be used in place of gas and the gas facilities kept as auxiliary or reserve; also in many business offices where no light is used the larger part of the year and but for short hours in winter.

The Service Charge therefore allocates the costs of service where they belong and is a step towards equity and justice in gas rates. The Service Charge adopted for New Haven is not high enough to fully carry out the principle described but is a step in that direction. It is the belief of the management of the Company that in the long run the Service Charges will work out to the advantage of all of our consumers.

Any gas consumer, desiring further explanation, is invited to call at the Company's office where the officers will try to make all points clear.

New Haven Gas Light Company

July 28, 1920.

By CHARLES H. NETTLETON, President.

The service charge is one of the most difficult subjects to explain to the public. In the above advertisement, the New Haven Gas Company takes up the subject from its various angles, and makes its position clear.

Live Issues Before The Section

ONE of the largest attended and most interesting meetings of the Managing Committee of the Publicity and Advertising Section was held at Association Headquarters on the afternoon of September 17th.

Two important subjects not discussed heretofore came up for action. One related to a change in the Section's name. The other had to do with the promotion throughout the country of committees on public utility information similar to the committee now functioning in Illinois. Both subjects were presented to the Executive Board at its meeting on September 21st and both were referred back to the Section for further consideration.

In regard to a change in name, Mr. Mullaney and Mr. Carraway were of the opinion that the name "Public Relations Section" was in line with the chief object of the Section, which was the promotion of better public relations, and that it should be substituted for "Publicity and Advertising Section." Both speakers suggested that one of the first duties of the Section operating under the name of Public Relations should be the establishment in every gas company of a depart-

ment similarly named, such department to be in charge of a competent man who will keep in close touch with the central department at headquarters to further better relations with the public.

This matter will come up for further discussion at the next meeting of the Managing Committee, as will the plan for organizing state committees on public utility information, after which they will be presented to the Executive Board in more concrete form for such action as it may desire to take.

One of the tasks immediately ahead of the Section is a campaign for additional members. Messrs. Mullaney, Higgins, and Carraway constitute a Committee of Promotion which is charged with getting the campaign under way. This Committee intends to take full advantage of the opportunity of meeting gas men who are interested in publicity and advertising at the forthcoming convention and of getting them actively engaged in the Section's work. Following the Convention an intensive campaign will be waged to bring into the Section every advertising and publicity man in the gas industry.

The War is Won, but the Red Cross Still Goes on!

They Believe in Advertising in Charles City

WHEN a gas company operating in a small town of 7,300 inhabitants is doing business at a loss and notwithstanding this deems it a wise policy to take its problems straight to the people of the community through paid advertising space in the local press, one is apt to conclude that the reaction in the public mind would be hostile to the company and that it would be accused of "a further waste of the people's money."

Such is not the case, however, with the Charles City Gas Company, of

Charles City, Iowa, and its consumers. This company has recently engaged in an advertising campaign of considerable proportions and the note struck from the beginning has been one of the utmost frankness, backed up with a full exposition of the company's operating problems.

As one of the advertisements states: "There are no secrets in the gas business, and the information that appears here and that which we will publish from time to time is given so that the public may

(Continued on page 717)

The Gas Rate Question Has Not Been Settled.

By their action taken last night the City Council voted to spend the people's money in a lawsuit over gas rates.

The Gas Company is losing approximately \$30.00 every day that they operate and last night the City Council offered them a gas rate that would reduce this loss to approximately \$12.00 per day under present conditions which are becoming more and more unfavorable. We feel the time has gone when the Gas Company must be compelled to operate at a loss in serving this community.

The Company requested a gross rate of \$2.20 per M. cubic feet and with a discount of 20 cents per M. making the NET gas rate \$2.00 and the City Council offered us a gross rate of \$2.00 with a discount making the net gas rate \$1.80 which we cannot accept because it will not permit us to make our operating expenses.

The Charles City Gas Company serving a population of 7300 people is offered a NET gas rate of \$1.80 and Ottumwa, Iowa, a city of 25000 has been given a NET gas rate of \$1.80 per M., which is now in effect through action of their City Council. On the basis of this rate and those in effect in other large cities of the state, Charles City should have a present gas rate of \$2.50. We again call attention to NET gas rates now in force in other cities of Iowa and being paid at this time. We pause to ask you if Charles City is not favored by our modest request.

Mosier City pays.....	\$1.00 net	Ames pays	2.35 net
DeBussche pays	1.75 net	Fairfield pays	2.35 net
Fort Dodge pays	1.90 net	Ferry pays	2.35 net
Mason City pays	1.90 net	Atlantic pays	2.35 net
Oskaloosa pays	1.90 net	Chariton pays	2.45 net
Albia pays	2.00 net	Grinnell pays	2.50 net
Creston pays	2.00 net	Newton pays (Municipal plant run by city)	2.50 net
Red Oak pays	2.10 net		
Shenandoah pays	2.15 net		

Some of these gas rates have been put in effect by court order. As the City Council has refused to reconsider their refusal of our request for a \$2.00 NET gas rate there seems to be only two ways left open for the gas company to remedy a very serious situation for both the company and this community.

1. It is possible to stop spending more money than we are taking in by refusing to purchase \$21.00 coke, \$10.00 coal and 10 cent gas oil, which prices even, have no limit. When reserve stocks are exhausted we can shut down.

2. It is possible to seek relief through the courts.

We do not desire to follow the first course, neither do we desire to be compelled to take the second course which would mean that both the city and the Gas Company must spend money for litigation and as is always the case the people have to pay in taxes and higher gas rates for such unnecessary expenses.

If the Gas Company have to get a living and adequate gas rate through expensive legal and court proceedings, this extra expense must be added to the cost of gas and a rate to include these items must be requested from the court. This rate would be more than the TWO DOLLAR NET RATE we have requested of the city.

THIS HAS ALL BEEN POINTED OUT TO THE CITY COUNCIL.

The Gas Company has from time to time in these columns informed the public of the facts and of our real needs only, without any idea of having them considered as a trading proposition. We certainly do not want anything said here to be construed as a threat in any way whatever and if we are compelled to resort to the courts it is simply because of unnecessary delays and a situation which we would if possible avoid. Under present conditions we will be forced to seek this relief at once.

Charles City Gas Company

Charles City, Iowa.

One of a series of advertisements published by the Charles City Gas Company, a progressive company which believes that its consumers are entitled to the facts and that the most effective way to tell them is through paid space in the local press.

In regard to its publicity campaign for adequate rates, R. K. Runner, secretary and manager of the company, states:

"I am sure from what has been said by consumers coming into the office, as well as what has been said to me outside, that there is a greater and more intelligent interest in the affairs of the company because of our publicity campaign. All the comment received has been favorable to our being given what we ask for."

Study this Section's Exhibit at the Convention

CONVENTION time is going to be exhibition time for this Section as well as for the manufacturers of appliances and apparatus. While the manufacturers and their interested friends hold forth on the roof garden of the Hotel Pennsylvania, we, the advertising and publicity men of the industry, are going to hold forth on the main convention floor where there will be displayed a varied and interesting collection of publicity and advertising matter bearing on every angle of the gas business.

For ten months now our member companies have been sending us copies of their advertising material and other literature, in generous response to our appeal, made patiently for a long time, that A. G. A. headquarters should be a clearing house of information for the entire industry. Were it not for the earnest co-operation afforded us by those who have given us the closest support in our work, this exhibit would be impossible.

We have, in addition to hundreds of advertisements covering a wide variety of subjects, a splendid collection of booklets, pamphlets, gas bill stickers, magazine and newspaper articles and merchandising literature which shows the progress made during the past year in the field of the printed word.

To the man interested in advertising, this exhibit will offer a rare opportunity to study and take notes on the most effective forms and media used. Whole mer-

chandising, good will, public policy and rate increase campaigns will be displayed and printed placards will give a short explanation of each and the results obtained. A study of the exhibit will enable the advertising man to widen his horizon and to gain a wealth of new ideas that have been put to the test and have proved successful.

If you are up against an advertising problem, you will find a solution for it here. If you are planning a campaign and you have exhausted all material at hand, you will find a great assortment of facts and figures to draw from.

The exhibit itself will answer such questions as: "How is the best way to gain consumer confidence when a rate hearing is going on?" "What kind of advertising should be done following the granting of a rate increase?" "Should good will advertising be done during a merchandising campaign?" "What is the most effective way to put a message across: In the newspapers or in printed slips or pamphlets accompanying gas bills?" "Should we take the trouble to show our employees copies of our good will advertisements?" and many others.

Visit this exhibit with the idea in mind of bettering your work and of making your services more valuable to your company.

We need your ideas.

You need ours.

During the thirty-nine years since the American Red Cross was organized, it has given relief in 250 cases of disaster relief, and directed the expenditure of more than \$13,000,000.

COMMERCIAL SECTION

C. A. MUNROE, Chairman

LOUIS STOTZ, Secretary

J. P. HANLAN, Vice-Chairman

MANAGING COMMITTEE — 1920

At Large

BARROWS, GEO. S., Providence, R. I.
BARTLETT, C. E., (Mfr.) Philadelphia, Pa.
BENNETT, GEO. E., New York, N. Y.
BOND, C. O., Philadelphia, Pa.
BUCKMINSTER, ROLLIN, Pawtucket, R. I.
BURNS, J. J., St. Louis, Mo.
CHRISTMAN, H. S., Philadelphia, Pa.
CLARK, H. H., Chicago, Ill.
CLARK, W. J., Mt. Vernon, N. Y.
DAVIES, J. E., Chicago, Ill.
DODSON, H. K., Baltimore, Md.
DOULL, R. S., New York, N. Y.
ELSMAN, RALPH, Brooklyn, N. Y.
GASTON, LUTHER, Spokane, Wash.
GOULD, WM., Boston, Mass.
HUTTEN, HARRY W., (Mfr.) Baltimore, Md.
JARDINE, BERT H., Knoxville, Tenn.
JASPERSON, R. O., Chicago, Ill.
KARSHNER, G. M., New York, N. Y.
KING, THOMSON, Baltimore, Md.
KNAPP, F. H., (Mfr.) Pittsburgh, Pa.
LOEBELL, H. O., New York, N. Y.
MACSWENNEY, J. P., Rochester, N. Y.

MAXON, H. R., (Mfr.) Muncie, Ind.
MUNROE, C. A., Chicago, Ill.
MYERS, J. B., Philadelphia, Pa.
PEFFLY, I. W., (Mfr.) New York, N. Y.
PETTENGILL, H. J., Jr., Woonsocket, R. I.
PISER, THEO. H., Boston, Mass.
POST, A. P., Philadelphia, Pa.
RABCH, W. T., New York, N. Y.
STANFORD, CLARK N., Denver, Colo.
TRUMBULL, G. R., New York, N. Y.
VINCENT, G. I., Syracuse, N. Y.
WRIGHTINGTON, E. N., Boston, Mass.

Representing Affiliated Societies

BARTON, WM. H., Portland, Ore. (Pacific Coast)
BORDEN, A. W., Hastings, Nebr. (Iowa Dist.)
BOWLIN, M. A., Jacksonville, Fla. (Southern)
BRANDES, JEROME, Chester, Pa. (Pennsylvania)
BURKE, E. J., Indianapolis, Ind. (Indiana)
CHAMBERLAIN, G. R., Grand Rapids, Mich. (Michigan)
CRAFTS, H. C., Pittsfield, Mass. (N. E. Gas Eng.)
FLAUT, J. J., New Orleans, La. (South Central)
HANLAN, J. P., Newark, N. J. (New Jersey)
MCINTYRE, W. H., Ont., Can. (Canada)
ST. JOHN, JOHN, Madison, Wisc. (Wisconsin)

CHAIRMEN OF SECTION COMMITTEES ORGANIZED TO DATE

Sales Development—WM. GOULD, Boston, Mass.
Compensation (Sub)—G. M. KARSHNER, New York, N. Y.
Filling in the Valleys in Gas and Appliance Sales (Sub)—
WM. GOULD, Boston, Mass.
Maintenance (Sub)—ROLLIN BUCKMINSTER, Pawtucket,
R. I.
Putting Non-Profitable Consumers on a Profitable Basis
(Sub)—B. H. JARDINE, Knoxville, Tenn.
Sales Campaigns (Sub)—H. J. PETTENGILL, Jr., Woon-
socket, R. I.
Work Schedule (Sub)—G. I. VINCENT, Syracuse, N. Y.
Gas Lighting—THEO. H. FISER, Boston, Mass.

Heating—GEO. E. BENNETT, New York, N. Y.
Industrial Fuel Sales—H. H. CLARK, Chicago, Ill.
Furnace Performance Standards (Sub)—I. LUNDOGAARD,
Rochester, N. Y.
Improvement of Atmospheric Burners (Sub)—JEROME
BRANDES, Chester, Pa.
Proportional Mixing (Sub)—CHAS. C. KRAUSSE, Balti-
more, Md.
Recuperation and Regeneration (Sub)—H. O. LOEBELL,
New York, N. Y.

A Special Sale of Tank Gas Water Heaters

BY B. A. DUVALL

ONE hundred and forty-five Vulcan No. 9 Tank Gas Water Heaters sold in one hour and fifteen minutes, was the fine record set by the Merchandise and Domestic Sales Department of the Consolidated Gas, Electric Light and Power Company of Baltimore, on Monday, August 23d. This remarkable sale was conducted quietly and efficiently, with the help of an augmented sales force, which had been thoroughly coached in all possible requirements of the sale.

The event was announced to the public by clear, forceful, half-page advertisements in the two local Sunday news-

papers. In large type, in accord with the present spirit of economy and thrift, appeared the words:—"SAVE \$7.25." Then followed in slightly smaller type, well spaced, headlines giving the vital points of the sale. Pertinent, snappy sentences were used to tell the story, such as:

"Be early if you want to save money—if you want convenient, economical and satisfactory hot water service in your home. This hot water heater is ordinarily priced at \$28.20. If you buy one to-morrow morning you'll save \$7.25. Place your tag on one and it will be delivered to your home and attached to the boiler in your kitchen."

The water heaters were placed on the store floor in their original crates. Ordinarily, just a sample or two of an appliance is shown on our display floor, and we expected this unusual way of handling the heaters would prove successful in attracting attention and arousing the interest of those who may not have seen the Company's advertisements. Then, it was also done to prevent overselling, which occurs so often with unfortunate results in such a sale, for the salespeople were instructed to strictly adhere to the "ad" and to tag each heater as sold.

Our salespeople were thoroughly interested, and we secured the co-operation of all who were to assist us in the successful completion of the sale — we believe absolutely in team-work — and we anticipated the results with confidence.

The results were more than gratifying. Like the rain-drops in the summer shower, the crowds were there in number. The salesforce, knowing just what had to be done, filled out orders rapidly and smoothly, the heaters were tagged with the proper names and addresses, and one hour and fifteen minutes after the sale was started, a large "SOLD" sign was placed over the lot, and the sale was over.

The Gas and Electric Company has the confidence of the Baltimore public in the quality of merchandise it sells, and in the honesty of its advertising. Our people, during the sale, as at all times, served with a maximum of efficiency, and we found that a "Special Sale" can be held without confusion, and with beneficial results to both the public and ourselves. Try one, and see how it puts "pep" and ginger into your organization.

Give to the Red Cross!

An Industrial Fuel Paper

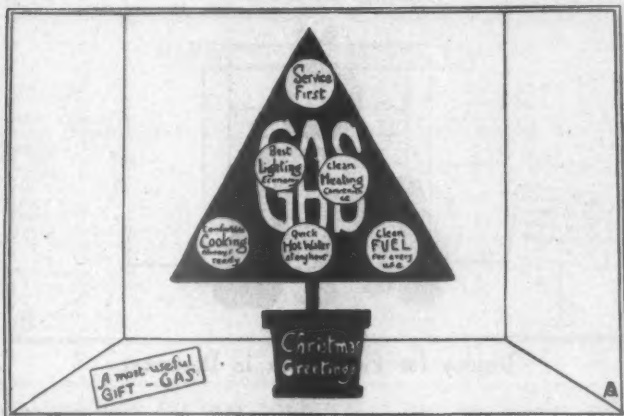
THE American Society for Steel Treating held its second annual convention and exhibition at Philadelphia, September 14-18. At the Technical Session on Fuels and Their Efficiency, Mr. Ehlers, the Industrial Fuel Engineer of this organization, read a paper entitled "Fuels and Their Application to Metal Treating."

To quote an excerpt from the *Iron Age*:

"Mr. Ehlers declared that gas fired furnaces provide the necessary uniform temperature throughout the entire heated area and that gas as a fuel both for flexibility and availability is superior to the other fuels generally used, such as coal, coke, kerosene, gasoline and fuel oil. The speaker dwelt particularly on fuel oil and pointed out how its price is continually mounting. Gaseous fuels, such as coal gas, coke-oven gas, water gas and producer gas, are well suited for use as fuel in metal treating processes. Gaseous fuel is

economical, can be applied with minimum waste and can be easily mixed in correct proportions for proper combustion. Control of air-gas ratio means a higher rate of combustion, a relatively higher flame temperature and therefore a higher thermal efficiency. In comparing heating values Mr. Ehlers asserted that fuels should be considered in relation to the heating value of the combustible mixture. Heat transfer is best accomplished by radiation and convection and not by conduction. For industrial heating operations gaseous fuel should always be mixed with air before the gas has reached the zone of combustion. Three types of devices for mixing the air and gas are utilized: (1) The air injector; (2) proportional mixers, used with either low or high pressure gas; (3) gas and air mixing machines which deliver a constant and uniform mixture of air and gas at any predetermined ratio. It is to be regretted, the speaker declared, that in the majority of gas-fired furnaces the air injector is used for mixing for untrained furnace attendants do not adjust the valves for the proper mixture."

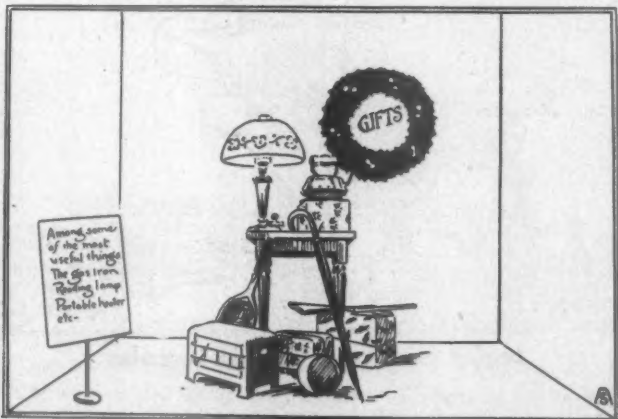
Window Display Suggestions for November



Display for Third Week in November

20a

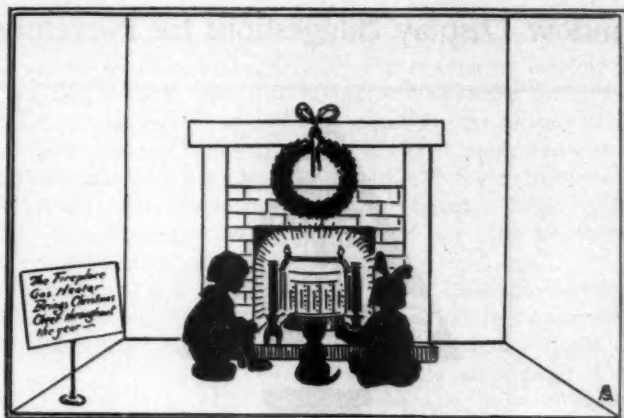
A large cut out tree painted green; GAS lettered in black and gold; painted colored balls with gift suggestions in black print on each ball. Red box—with gold and black lettering.



Display for Fourth Week in November

20b

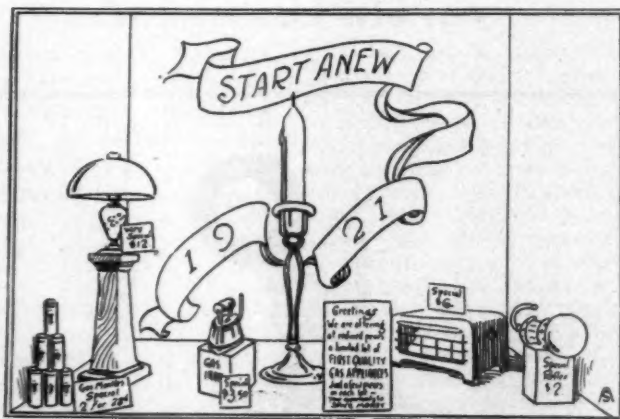
Just three or four gas appliances grouped on a small table with other things suggestive of the Christmas gift spirit. A card to convey the thought.



Display for First Week in December

20c

A fireplace with Christmas trimmings—three wall board cut-outs in black to give a silhouette effect—are placed before the fire. All lights are out in the window and the heater is lighted.



Display for Second Week in December

20d

Suggesting a clean-up sale featuring a few odd pieces of first quality goods with price tickets attached. The candlestick furnishes the New Year touch. Note: A novel idea would be to build up a huge candlestick and candle, out of pipe tin, etc.—a little bronze and paint will work wonders—pipe with a small pipe and have the candle flame burning gas.

MANUFACTURERS SECTION

W. GRIFFIN GRIBBEL, Chairman

GEORGE S. BARROWS, Vice-Chairman

W. W. BARNES, Secretary

MANAGING COMMITTEE — 1920

At Large

BARNES, W. W., New York, N. Y.
BARROWS, GEORGE S., Providence, R. I.
BRILL, A. F., Pittsburgh, Pa.
BRUCE, HOWARD, Baltimore, Md.
COLLINS, D. J., Philadelphia, Pa.
CONROY, J. F., New York, N. Y.
CRANE, WM. M., New York, N. Y.
DEHART, J. S., Newark, N. J.
GRIBBEL, W. GRIFFIN, Philadelphia, Pa.
HUTCHINSON, W. P., Bridgeport, Conn.
LOHMEYER, H. B., New York, N. Y.
MARON, SIDNEY, Gloucester, N. J.
NORTON, HARRY A., Boston, Mass.
PEFFLY, IRVING W., New York, N. Y.
REES, RICHARD, Kalamazoo, Mich.
ROBERTS, EARL W., Detroit, Mich.

ROPER, GEO. D., Rockford, Ill.
SCHALL, H. D., Detroit, Mich.
STITES, TOWNSEND, Gloucester, N. J.
WICKHAM, LEIGH, St. Louis, Mo.

Representing Affiliated Societies

BARCOCK, C. B., San Francisco, Cal. (Pacific Coast)
BARTLETT, C. E., Philadelphia, Pa. (Pennsylvania)
BREWER, E. D., Atlanta, Ga. (Southern)
CHAPIN, C. H. B., New York, (Empire State)
ECCLES, GEO. W., Waltham, Mass. (N. E. Gas Eng.)
GIBSON, W. R., Toronto, Can. (Canadian)
LONG, H. J., New Brunswick, N. J. (New Jersey)
MCCULLOUGH, CHAS., Milwaukee, Wis. (Wisconsin)
MILLER, THOS. D., Detroit, Mich. (Illinois)
SEIDENGLAND, C. H., Dallas, Texas (So. Central)
SCHALL, H. D., Detroit, Mich. (Michigan)
WARREN, W. M., St. Louis, Mo. (Iowa Dist.)
WESTON, J. A., Lansing, Mich. (Indiana)

CHAIRMEN OF SECTION COMMITTEES ORGANIZED TO DATE

Membership—WM. M. CRANE, New York, N. Y.
Apparatus Makers—D. J. COLLINS, Philadelphia, Pa.
Nomination—WM. M. CRANE, New York, N. Y.
Exhibition—W. GRIFFIN GRIBBEL, Philadelphia, Pa.
Illustrated Lectures—GEORGE S. BARROWS, Chairman
Division of Meter Manufacturers—DONALD McDONALD, Chairman, W. F. HUTCHINSON, Vice-Chairman
Division of Gas Range Manufacturers—WM. M. CRANE, Chairman, I. W. PEFFLY, Vice-Chairman
Division of Water Heater Manufacturers—H. J. LONG, Chairman
Division of Office Labor Saving Devices Manufacturers—H. B. LOHMEYER, Chairman, R. J. FERRIS, Vice-Chairman

Division of Heating Appliance Manufacturers—GEO. S. BARROWS, Chairman
Division of Industrial Appliance Manufacturers—S. TULLY WILSON, Chairman
Division of Lighting Appliance Manufacturers—J. F. CONROY, Chairman
Division of Apparatus & Works Manufacturers—J. S. DEHART, Jr., Temporary Chairman
Division of Supply Manufacturers—R. MUELLER, Temporary Chairman
Division of Accessories Manufacturers—R. RYAN, Temporary Chairman

"Success waits upon ability and loyalty. Let's go!"—Geo. B. Cortelyou

Company Member



The Seal of

STANDARD PRODUCT AND ASSOCIATION SUPPORT

All company members, Manufacturers Section, are urged to use the above emblem on all stationery, catalogues and literature as company members of this Association.

Convention and Exhibition

ALL details pertaining to the Second Annual Convention and Exhibition of the Association have been fully completed. It is predicted that the Exhibition this year will be one of the most interesting ever held. The segregation of exhibits has met with hearty approval by

manufacturers which is attested to by exhibits of manufacturers who have this year made their initial demonstration of their product.

The gas engineer will find much to interest him in the Butterfly Room on the Roof where manufacturers of apparatus,

works, equipment, etc., will give practical demonstrations of their products by means of models and balopticon views.

The section devoted to office labor saving devices will be represented by the leading manufacturers in that field. Accountants will find much to interest them in these exhibits of the "last word" in labor saving accounting.

In the main exhibition hall, seventy manufacturers will exhibit their various products, consisting of ranges, water heaters, room heaters, gas ironing machines, gas irons, hotel equipment, industrial and lighting appliances and specialties, all demonstrated under working conditions.

In addition to commercial gas men attending the Exhibition, invitations have been sent to plumbers, hardware dealers, gas appliance dealers, real estate boards and architects to visit this exhibition and become acquainted with the modern and approved appliances which our company members are marketing.

The Exhibition will be open daily from 10 A. M. to 6 P. M., during which hours exhibitors are requested to have at least one attendant in their booths.

Collective Gas Lighting Exhibit

The Collective Gas Lighting Exhibit, under the supervision of the Division of Lighting Appliance Manufacturers is another departure in this year's Exhibition which was instituted in the hope of stimulating interest in gas lighting. Company members in the lighting field will compete with one another in displaying lighting units of distinctive designs for the approval of commercial men. Gas portables will also be shown in a collective way, samples being furnished by manufacturer company members.

It is hoped that the placing of tangible orders will be evidenced this year to encourage lighting appliance manufacturers in the production of units that will help commercial men to hold the present gas lighting load rather than in losing it.

Red Cross Membership is an Honor Roll!

MANUFACTURERS SECTION MEETING

The meeting of the Manufacturers' Section will be held on Monday, November 15 at 10:30 A. M. This will be the only meeting of the Section during the week of the Convention. In former years an effort was made to have two or more meetings at which the attendance was limited. Appreciating the fact that manufacturers' interests are largely in their exhibits it is hoped that this meet-

ing being called the day before the opening of the Convention, representatives of company members will arrange to attend in order that the routine business can be transacted and future activities freely discussed. "Present Merchandising Problems" confronting every manufacturer will be one of the subjects for discussion.

If you have not as yet made your
HOTEL RESERVATIONS
Do so without delay
Addressing
HOTEL PENNSYLVANIA
New York, N. Y.

PRESENT MERCHANDISING PROBLEMS

At the last meeting of the Managing Committee, the chairman appointed a committee consisting of

William M. Crane, Chairman
George S. Barrows
F. H. Knapp
H. J. Long
George D. Roper
A. P. Brill
C. E. Bartlett

to confer with a committee from the Commercial Section on the subject of bringing about if possible a solution of a condition at present existing in the merchandising field.

In some territories where manufacturers have sales agencies established and supply the consumer direct, it has been found that gas consumers services were overtaxed through the installation of appliances on present services without notifying gas companies of these sales. In

some cases large demand appliances have been installed on companies' lines which were overloaded and frequent complaints were made due to poor or inadequate service. It was thought that an ideal condition might be arrived at to have the committees confer on this most important subject and reach a conclusion.

Mr. C. A. Munroe, Chairman of the Commercial Section appointed the following representatives for the Commercial Section:

J. B. Myers, Chairman
J. E. Davies
B. A. Duvall
G. R. Chamberlain
Wm. Gould

Mr. Crane, Chairman of the Joint Committee has called a meeting of this committee, the result of which will be reported at the November Section Meeting.

One Dollar Will Make You a Member of the American Red Cross!

GROUP PUBLICITY

Exhibits at state and district gas association meetings having been discouraged for the past few years, the Section proposes to prepare for use in the Balopticon machine, views of the exhibits of the coming Exhibition. These views will be shown at the annual meetings of our affiliated associations. Officials and employees of small gas companies not attending the Annual Convention and Exhibition of the American Gas Association can in this way witness the display. A

featured appliance demonstrated by exhibitors will also be shown in addition to the reproduction of the complete exhibit.

Nominating Committee Report

The Nominating Committee of the Manufacturers' Section consisting of William M. Crane, S. Tully Willson and C. Edward Bartlett, recommend

George S. Barrows for Chairman

John S. DeHart, Jr., for Vice-Chairman

for the ensuing year. Election will be held at the November 15 meeting.

FOR A HEALTHIER AMERICA.

One hundred thousand American women have taken the American Red Cross course in elementary principles of household sanitation and nursing it was revealed at a Washington conference. The work is being introduced into the curricula of high schools, seminaries and women's colleges in all parts of the country.

EXHIBITORS AT THE 1920 EXHIBITION

List of Exhibitors

- | | |
|--|--|
| <p>No. 1. Young Brothers Co., Detroit, Mich.
 2. B. Ryan Co., New York, N. Y.
 3. Humphrey Co., Kalamazoo, Mich.
 4. Kramer Bros. Lamp Co., Inc., New York, N. Y.
 5. The Baltimore Gas Appliance & Mfg. Co., Baltimore, Md.
 6. General Gas Appliance Co., New York, N. Y.
 7. The Surface Combustion Co., New York, N. Y.
 8. Quick Meal Stove Co. Div., St. Louis, Mo.
 9. J. B. Slattery & Bro., Inc., Brooklyn, N. Y.
 10. The Crandall Pettee Co., New York, N. Y.
 11. Atlantic Tubing Co., Providence, R. I.
 12. Novo Mfg. Co., Inc., New York, N. Y.
 13. New Process Stove Co. Div., Cleveland, Ohio.
 14. Strause Gas Iron Co., Philadelphia, Pa.
 15. Welsbach Co., Gloucester, N. J.
 16. Welsbach Co., Gloucester, N. J.
 17. The Eclipse Stove Co., Mansfield, Ohio.
 18. The Hoffman Heater Co., Lorain, Ohio.
 19. The Michigan Stove Co., Detroit, Mich.
 20. Eriez Stove & Mfg. Co., Erie, Pa.
 21. Benson Mfg. Co., Chicago, Ill.
 22. Barnett Foundry & Machine Co., Irvington, N. J.
 23. Robertshaw Mfg. Co., Youngwood, Pa.
 24. J. M. Sherwood Co., New York, N. Y.
 25. Ruud Mfg. Co., Pittsburgh, Pa.
 26. Chambers Mfg. Co., Shelbyville, Ind.
 27. The Milwaukee Gas Specialty Co., Milwaukee, Wis.
 28. Meek Oven Mfg. Co., Westport, Conn.
 29. The Lovekin Water Heater Co., Philadelphia, Pa.
 30. Cabco Sales Co., Gowanda, N. Y.
 31. The G. S. Blodgett Co., Burlington, Vt.
 32. Grinnell Co., Inc., Providence, R. I.
 33.
 34. The A. H. Wolff Gas Radiator Co., New York, N. Y.</p> | <p>35. Eastman Mfg. Co., Manitowoc, Wis.
 36. Philadelphia Stove Co., Philadelphia, Pa.
 37.
 38. Reliable Stove Co. Div., Cleveland, Ohio.
 39.
 40. Bishop Gutta-Percha Co., New York, N. Y.
 41. Wm. M. Crane Co., New York, N. Y.
 42. American Gas Appliance Co., Brooklyn, N. Y.
 43. Walker & Pratt Mfg. Co., Boston, Mass.
 44. Roberts & Mander Stove Co., Philadelphia, Pa.
 45. George D. Roper Corp., Rockford, Ill.
 46. James B. Clow & Sons, Chicago, Ill.
 47. General Gas Light Co., New York, N. Y., and Kalamazoo, Mich.
 48. General Gas Light Co., New York, N. Y., and Kalamazoo, Mich.
 49. A-B Stove Co., Inc., Battle Creek, Mich.
 50. The Kompak Co., New Brunswick, N. J.
 51. Reznor Mfg. Co., Mercer, Pa.
 52. The Ofeldt Gas Fired Boiler Co., Inc., Nyack, N. Y.
 53. The Bryant Heater & Mfg. Co., Cleveland, Ohio.
 54. The DeMatteis Broiler System Co., Inc., New York, N. Y.
 55. Comstock-Castle Stove Co., Quincy, Ill.
 56. Charles A. Hones, Inc., Baldwin, Long Island, N. Y.
 57. Peninsular Stove Co., Detroit, Mich.
 58. Abram Cox Stove Co., Philadelphia, Pa.
 59. Johnson Gas Appliance Co., Cedar Rapids, Iowa.
 60. The J. H. Grayson Mfg. Co., Athens, Ohio.
 61. Detroit Stove Works, Detroit, Mich.
 62. Union Stove Works, New York, N. Y.
 63. Pittsburgh Water Heater Co., Pittsburgh, Pa.
 64. Weir Stove Co., Taunton, Mass.
 65. Royal Art Glass Co., New York, N. Y.
 66. George M. Clark & Co. Div., Chicago, Ill.
 67. National Stove Co. Div., Lorain, Ohio.
 68. The Cleveland Heater Co., Cleveland, Ohio.</p> |
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(Continued on page 718)

TECHNICAL SECTION

L. R. DUTTON, Chairman

H. W. HARTMAN, Secretary

W. S. BLAUVELT, Vice-Chairman

MANAGING COMMITTEE — 1920

At Large

BLAUVELT, W. S., Terre Haute, Ind.
 CASTOR, W. A., Philadelphia, Pa.
 CHUBB, C. N., Davenport, Iowa.
 CONGDON, E. C., Atlanta, Ga.
 COLLINS, D. J., (Mfr.) Philadelphia, Pa.
 DUTTON, L. R., Jenkintown, Pa.
 HARNSHAW, E. H., Newark, N. J.
 FIELDNER, A. C., Pittsburgh, Pa.
 FORSTALL, WALTON, Philadelphia, Pa.
 FULWEILER, W. H., Philadelphia, Pa.
 HUFTENKAMP, J. P., Rochester, N. Y.
 HAZELTINE, L. A., Hoboken, N. J.
 HARPER, R. B., Chicago, Ill.
 MACARTHUR, DONALD, Jersey City, N. J.
 MACBETH, A. B., Los Angeles, Cal.
 MACBETH, G. T., Mt. Vernon, N. Y.
 NORMAN, O. E., Chicago, Ill.
 NORTON, H. A., (Mfr.) Boston, Mass.
 OLIPHANT, B. C., Buffalo, N. Y.
 PHILLIPS, A. I., Washington, D. C.
 STONE, C. H., Rochester, N. Y.
 UHLIG, E. C., Brooklyn, N. Y.
 WEBER, F. C., New York, N. Y.
 WILLIEN, L. J., Boston, Mass.

Representing Affiliated Societies

AUSTIN, E. E., Sumter, S. C. (Southern Gas)
 BROWN, J. A., Jackson, Mich. (Michigan)
 CHAPIN, C. H. B., New York, N. Y. (Empire State
 G. & E.)
 CHUBB, C. N., Davenport, Ia. (Iowa)
 CORNISH, R. C., Philadelphia, Pa. (Pennsylvania)
 HART, J. G., Waukegan, Ill. (Illinois)
 HUMPHREYS, J. J., Montreal, Canada. (Canada)
 JONES, E. C., San Francisco, Cal. (Pacific Coast)
 JONES, JACOB B., Bridgeton, N. J. (New Jersey)
 LYONS, B. F., Beloit, Wisc. (Wisconsin)
 NEAL, GEO. A., Hammond, Ind. (Indiana)
 PAIGE, C. E., Worcester, Mass. (N. E. Gas. Eng.)
 SEDBERRY, W. H., Marshall, Tex. (South Central)

CHAIRMEN OF SECTION COMMITTEES ORGANIZED TO DATE

Carbonization—J. P. HUFTENKAMP, Rochester, N. Y.
Cast Iron Pipe Standards—WALTON FORSTALL, Philadelphia, Pa.
Chemical—E. C. UHLIG, Brooklyn, N. Y.
 Vice-Chairman, R. B. HARPER, Chicago, Ill.
Deposits in Meters, Services, etc. (Sub)—O. A. MOR-
 HOU, Astoria, N. Y.
Purification—C. H. STONE, Rochester, N. Y.
Consumers Meters—W. A. CASTOR, Philadelphia, Pa.
 Vice-Chairman, GEO. WHEELER, Denver, Colo.
Re-Design of Distribution Systems—F. C. WEBER, New
 York, N. Y.

Disposal of Waste from Gas Plants—L. J. WILLIEN
 Boston, Mass.
Electrolysis—L. A. HAZELTINE, New York, N. Y.
 Vice-Chairman, ROBT. C. NEWBURY, Denver,
 Colo.
Gas Works Auxiliaries—C. N. CHUBB, Davenport, Ia.
 Vice-Chairman, R. A. CARTER, Jr., New York, N. Y.
Nomenclature—O. E. NORMAN, Chicago, Ill.
Refractory Materials—W. H. FULWEILER, Philadelphia,
 Pa.

Arrangement of Technical Sessions at 1920 Convention

AT a meeting of the Managing Committee, Technical Section, held at Association Headquarters September 22nd, final consideration was given to the arrangement of the sessions at the Convention and the manner of presenting papers and reports.

We would particularly call the attention of our members interested in distribution subjects to the decision to provide a separate session on Wednesday afternoon for the presentation and discussion of essentially distribution committee reports and papers. This arrangement it

is believed will not only provide additional time for the consideration of these subjects, but the greater interest of the members in the subjects presented will induce a more complete discussion. A separate meeting room will be provided for this session which will be coincident with the Manufacturing session arranged for Wednesday.

Some other changes were made in the arrangement of papers and reports which will be noted on the complete program of the Convention appearing on another page of this issue.

The Managing Committee also approved the use of a stereopticon with slides giving in abstract form the essential points of the report under discussion. This device will not only focus the attention of the members on the important matters covered in the report but will be of assistance to the Chairman in directing the discussion.

As reported in the August issue all reports and papers will be submitted in abstract form and the maximum time devoted to their discussion. The attention of the members is again called to the importance under this plan of securing and studying copies of reports in advance of the Convention, so that a full and intelligent discussion may be had.

Make it a point to advise Headquar-

ters of the subjects on the program of your Section in which you are particularly interested so that advance copies of such reports or papers can be mailed to you as soon as they are available.

Report of Nominating Committee

The Nominating Committee of the Technical Section has submitted its recommendations for Chairman and Vice-Chairman of the Section to serve during the next Association year as follows:

For Chairman—R. B. Harper, Chicago, Ill.

For Vice-Chairman—H. R. Cook, Jr., Baltimore, Md.

Action will be taken on the above Nominations at the Tuesday session of the Technical Section.

There is no Peace for the American Red Cross!

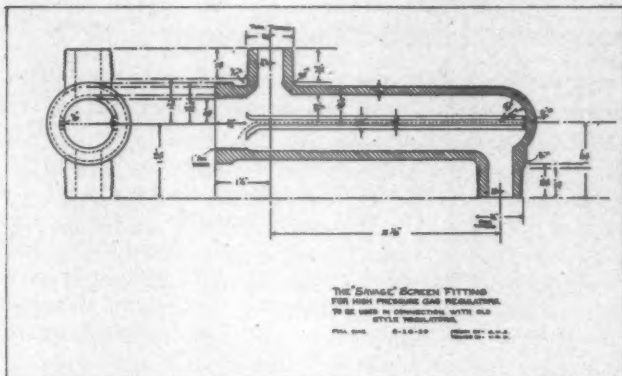
Stoppages in High Pressure Mains and Services

By J. D. SHATTUCK, Chester, Pa.

THE writer's belief is that the cause of the stoppages that occur in the mains, services and governors of high pressure systems originate at the gas compressors. If the gas could be cooled after compression before it leaves the works in condensers of sufficient area to drop out all the condensates which would fall if the gas were cooled to the ground temperature, there would be little or no trouble beyond this point, therefore the first problem is to cool your gas as low as you can under your water conditions.

There is constantly flowing through the mains oily material and light tar that may come from the gas or from the lubricating oils used in the compressor. These liquids flow through the mains, and as the pressure falls the lighter particles are absorbed by the gas. Eventually the heavy oils and tars are deposited

in the mains in level areas or in trapped or partially trapped portions of the mains. These semi-liquids will lay in these places over a considerable period or until such time that there is a sudden demand on the line when the volume of gas passing through the main is so great that the friction will carry these liquids ahead. Ordinarily in an untaxed main system this material never reaches the governors in a liquid or semi-liquid form but does appear in powdered form. I have had one case, however, where it appeared in the bowl of a governor and completely filled the governor with a pitch that upon exposure to the air becomes quite hard. The most frequent trouble, however, is the appearance of a fine black powder which stops up the services and governors. This material generally appears first on the services where the demand is great-



once in six months there will be no complaint in the use of instantaneous water heaters. The usual complaint arises from the fact that the particles of dirt and dust entrained with the gas gather on the valve seat of the governor and cause irregular va-

est, particularly on services that have connected to them instantaneous water heaters.

To largely overcome this we designed a strainer which can be used independent of the governor or in combination with the governor as shown in the accompanying sketch.

The strainer is self-explanatory. It consists of simply a casting so arranged that the gas in entering has considerable chance to expand and slow up in velocity. The strainer is divided into two sections separated by a very fine brass or copper screen.

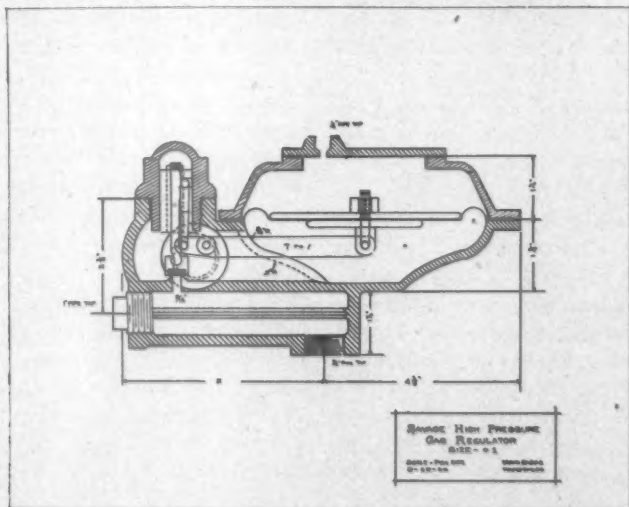
As a rule if this strainer is cleaned

variations of pressure and finally the blowing of the safety seal.

In the governor shown in illustration the valve seat is so arranged that it always seats in the same position and will seat satisfactorily longer than a governor that does not have this feature.

By the use of these strainers the complaints due to blowing seals are almost eliminated, providing of course that some periodical attention is given to the cleaning of the strainers.

The strainer opening is also used to connect a hose to the outside of a building for blowing sediment from service and cleaning strainer.



Cooperation in Electrolysis Research¹

Research Sub-Committee of American Committee on Electrolysis and United States Bureau of Standards are Working Jointly in Collecting and Digesting Data

¹ At the request of Mr. H. C. Sutton, Secretary of the Research Sub-Committee of the American Committee on Electrolysis, we are reprinting the above article from the *Electric Railway Journal*, issue of April 10, 1920. Reprints of this article have been furnished by the Research Sub-Committee to the various Associations interested for distribution to their members. We believe that a greater number of our members who are interested in electrolysis will be advised of the progress made in this work through the MONTHLY than by a mail distribution of the article and trust that our members will accord the Research Committee such cooperation as they may require in their work.—(EDITOR.)

FROM time to time the *Electric Railway Journal* has discussed the work of the American committee on electrolysis and its predecessors and the researches which have been made by the United States Bureau of Standards. Now that the American committee is taking up its work again actively, with meetings of the research sub-committee held on the last Friday of each month, it is appropriate to review the whole program of research on prevention of electrolysis from stray electric currents as planned by the American committee in cooperation with the Bureau of Standards. The present article has been prepared with this idea in view.

Those who were concerned with the operation of electric railways in the nineties and the early years of the present century will recall the incredulity and surprise attending the first evidences of stray-current electrolysis, and how this surprise was followed by dismay as increasing numbers of pipes were unearthed showing the ravages of unconfined currents. It was a phenomenon entirely new and unforeseen to the railway engineers as well as the pipe and cable-owning companies, and one for which no effective remedy was known.

In those early days the return circuit was not given the attention that it now receives, partly because the importance of the electrolysis problem was not appreciated, partly because of the primitive state of the art of rail bonding and often because the earth was intentionally relied upon to carry the return current, on the assumption that it offered no electrical resistance.

The history of the development of rail bonding is in itself an interesting story and those who are familiar with it know that the number of types of bonds which have been used is legion. The bonded rail joint has been the weakest link in the return circuit and until the adoption of the welded joint, now commonly used in the larger cities, was responsible more than any other one thing for the extremely bad electrolysis conditions which existed in many cities. With the improvement of the return circuit through the use of heavier rails, better bonds, welded joints and supplementary feeders, railway loads also increased and often at a rate far greater than the increase in the return circuit. The result was that with the phenomenal growth of the electric railways those factors which were not vitally and immediately necessary to the operation of the cars were often slighted or entirely neglected. In not a few instances the electrolysis problem was one of the factors neglected during this early period.

From the very first appearance of electrolysis, nearly thirty years ago, there has been no end of speculation and uncertainty concerning the whole subject. The difficulty of observing the extent and progress of damage on underground structures; the rapidly changing condi-

tions resulting from extensions, improvements and abandoned power stations; the great variations in local conditions, as for example, earth resistance and different types of roadbed, as well as many other factors, all contributed to the difficulty of adequately analyzing and solving the problem. Many methods of correcting the trouble were proposed and used, but no standard practice has ever been agreed upon in this country other than the maintenance of the return circuit to the highest standard practicable. The cable-owning interests early found that a substantial degree of protection could be secured by draining the sheaths of the cables in areas where they were found to be positive to the earth, to the negative railway bus or to some other point on the return circuit, and this practice has been and now is consistently followed. The same method was employed, in some cases by the railways and in others by the water and gas companies, in an effort to protect the underground piping systems. This method of electrolysis mitigation, known as pipe drainage, though widely used, is in disrepute among engineers and pipe-owning companies.

It was because of the wide divergence of opinion and the lack of engineering knowledge on the subject of electrolysis, as exhibited by many requests for information, that the Bureau of Standards took up a general study of the whole problem in 1910. The first efforts of the bureau in this field were devoted to a study of some of the more important fundamental principles involved. Laboratory and field investigations were carried out and reports were published on many phases of the electrolysis problem. These included electrolysis in concrete; the laws governing the electrolytic corrosion of iron and lead; earth resistance, and its relation to electrolysis of underground structures; leakage resistance of

electric railway roadbeds; modern practice in the construction and maintenance of rail joints and bonds, and the principal methods that have been proposed for electrolysis mitigation. Numerous field surveys were also made by the Bureau of Standards and these have not only formed the basis for a publication on the methods of making electrolysis surveys, but have given an opportunity to experiment with different methods of mitigation. The reports of these various laboratory and field investigations have had a wide distribution and have been very helpful to engineers in bringing about better electrolysis conditions.

American Committee on Electrolysis Formed

In 1913 through the activity of some members of the American Institute of Electrical Engineers, the American committee on electrolysis, first known as the joint national committee on electrolysis, was organized, representing the following organizations in addition to that already mentioned: American Electric Railway Association, American Gas Association, American Railway Engineering Association, American Telephone & Telegraph Company, American Water Works Association, National Electric Light Association, Natural Gas Association, National Bureau of Standards. On Feb. 25, 1914, at the second regular meeting of the committee, the following statement was made as the reason for its formation and is evidence that the committee was fully aware of conditions as they existed at that time:

Electrolytic controversies have in the past given rise to unnecessary and acrimonious disputes, and not infrequently have resulted in litigation between the corporations concerned. The usual procedure in disputes of this kind has been for each side to employ one or more electrical experts who generally disagree as to the cause of the trouble and the remedies therefor. The dispute sometimes gets into the newspapers, occasioning unpleasant notoriety and resulting in more or less drastic municipal

action by the city government concerned. Much of this could be avoided if a body such as this committee could be created which would consider broadly the questions covered by the controversy, without attempting to pass upon the questions at issue, but to report back to their respective organizations so that in time the committee would come to be recognized as a neutral body whose decisions would be authoritative, the same as the standards committee of the American Institute of Electrical Engineers in connection with matters of definition and standardization, which is a recognized authority that nobody ever attempts to question. With that end in view the institute initiated the movement to organize a national body to consider the general subject and agree upon any basic principles or methods of procedure to be followed in the case of electrolysis disputes.

In 1916 the American committee printed a preliminary report for submission to its principals under the following general captions:

- I. Principles and Definitions.
- II. Methods of Making Electrolysis Surveys.
- III. American Practice.
- IV. European Practice.
- V. Bibliography.

No effort was made to standardize practice or to agree on methods of mitigation.

After the preparation of this report and during the period of the war the committee was inactive. The Bureau of Standards also, except for making a few surveys, devoted all of its activities to military and naval problems for a period of two years or more, so that no material progress in electrolysis mitigation was made during this period.

It thus appears that at the present time, although much valuable research work has been done and the individual utility companies, working independently, have in many cities brought about greatly improved electrolysis conditions, there still remains much difference of opinion as to the applicability of the various methods of mitigation, and the conditions described in 1914 at the organ-

ization of this joint committee and which the committee was formed to correct are, in large measure, still prevalent.

In reviving activities a year ago, the American Committee on Electrolysis appointed a research sub-committee to engage actively in technical investigations in cooperation with the Bureau of Standards, for the purpose of securing needed information particularly on controversial questions.

Sub-Committee on Research is Now at Work

The one subject more than any other upon which engineers have disagreed is pipe drainage. In spite of the wide application of this principle, there is much difference of opinion as to the extent to which it should be used. A number of questions such as, for example, joint electrolysis at high-resistance pipe joints, inter-change of current between unequally drained systems, and gas explosions on heavily drained pipes can be settled only by comprehensive study in the field, in cooperation with the local pipe owning companies. The research sub-committee and the Bureau of Standards are accordingly attacking these problems and are receiving the cordial support of a number of water, gas and railway companies. An investigation limited mainly to joint electrolysis has already been carried out in one city and valuable information obtained relating to joint electrolysis and interchange of current between different systems. Similar studies are to be made in a number of other cities and it is hoped that these will form the basis for substantial agreement on the whole subject of pipe drainage. Other methods of mitigation, including the three-wire method of power distribution and reduced feeding distances made possible by the use of automatic substations, will be studied with respect to their applicability under different conditions.

(Continued on page 720)

Associations Affiliated with A. G. A.

Canadian Gas Association

Pres.—C. S. Bagg, Montreal.
V.-Pres.—E. H. Caughell, St. Thomas, Ont.
2d V.-Pres.—Col. D. R. Street, Ottawa, Ont.
Sec.-Tr.—G. W. Allen, Consumers' Gas Co., Toronto.

Conv., 1921.

Empire State Gas & Electric Association

Pres.—Horace L. Mann, Buffalo, N. Y.
V.-Pres.—H. W. Peck,
C. G. M. Thomas.
Treas.—E. H. Rosenquest.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.

Illinois Gas Association

Pres.—W. M. Willett, Aurora, Ill.
Sec.-Tr.—R. V. Prather, DeWitt-Smith Bldg., Springfield, Ill.

Conv., 1921.

Indiana Gas Association

Pres.—W. W. Goodrich, Winchester, Ind.
V.-Pres.—J. D. Forrest.
Sec.-Tr.—E. J. Burke, Citizens Gas Co., Indianapolis, Ind.

Conv., 1921.

Iowa District Gas Association

Pres.—W. H. Taylor, Omaha, Neb.
Sec.-Tr.—H. R. Sterrett, Des Moines Gas Co., Des Moines, Ia.

Conv., 1921.

Michigan Gas Association

Pres.—J. W. Batten, Detroit City Gas Co., Detroit, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.

Conv., 1920.

Missouri Association of Public Utilities

Pres.—J. H. Van Brunt, St. Joseph Railway, Light, Heat & Power Co., St. Joseph, Mo.
Sec.-Tr.—F. D. Beardslee, 315 N. 12th St., St. Louis, Mo.
Wiley F. Corl, Chmn. Affiliation Com., Mexico Pwr. Co., Mexico, Mo.

New England Association of Gas Engineers

Pres.—W. F. Norton, Nashua, N. H.
V.-Pres.—V. E. Bird, New London, Ct.
Burton Smart, Portland, Me.
Sec.-Tr.—J. L. Tudbury, Salem Gas Light Co., Salem, Mass.

Conv., 1921.

New England Gas Sales Association

Gov.—H. J. Pettengill, Jr., Blackstone Valley Gas & Electric Co., Woonsocket, R. I.

New Jersey State Gas Association

Pres.—F. R. Cutcheon, Long Branch, N. J.

V.-Pres.—Jacob B. Jones, Bridgeton, N. J.
Sec.-Tr.—H. E. Mason, Consolidated Gas Co. of N. J., Long Branch, N. J.

Conv., 1921.

Pacific Coast Gas Association

Pres.—W. M. Kappus, Northwest Gas & Electric Equipment Co., Portland, Ore.
Sec.-Tr.—Henry Bostwick, 445 Sutter St., San Francisco, Calif.

Conv., 1920, Sept. 21-24—Portland, Ore.

Pennsylvania Gas Association

Pres.—J. H. Keppelman, Reading, Pa.
V.-Pres.—E. L. Smith, Towanda, Pa.
Luther Gaston, Lebanon, Pa.
Sec.-Tr.—W. O. Lamson, Chester County Gas Co., West Chester, Pa.

Conv., 1921.

South Central Gas Association

(formerly Texas Gas Association)
Pres.—P. E. Nicholls, Galveston, Texas.
V.-Pres.—C. B. McKinney, Dallas, Texas.
F. L. Weissner, San Antonio, Texas.
Sec.-Tr.—C. H. Seidenglanz, 1501 Commerce St., Dallas, Texas.

Southern Gas Association

Pres.—E. C. Stothart, Charleston, S. C.
1st V.-Pres.—J. A. Forney, Charlotte, N. C.
2d V.-Pres.—J. C. Nichols, Bluefield, W. Va.
Sec.-Tr.—G. H. Smith, City Gas Co., Norfolk, Va.

Conv., 1921.

Wisconsin Gas Association

Pres.—Bruno Rahn, Milwaukee, Wis.
Sec.-Tr.—Henry Harman, 182 Wisconsin St., Milwaukee, Wis.

Conv., 1921.

OTHER ASSOCIATIONS

Natural Gas Association of America

Pres.—Harry J. Hoover, Cincinnati, Ohio.
Sec.-Tr.—Wm. B. Way, 904-5 Oliver Bldg., Pittsburgh, Pa.

Conv., 1921—Cincinnati, Ohio.

Society of Gas Lighting

Pres.—Alex. H. Strecker, Newark, N. J.
V.-Pres.—W. Cullen Morris.
Sec.—Geo. G. Ramsdell, 130 E. 15th St., New York, N. Y.
Treas.—Wm. J. Welsh.

Conv., 1920.

Southwestern Electrical and Gas Association

Pres.—Burr Martin, Dallas, Texas.
V.-Pres.—A. Hardgrave,
C. E. Corder,
A. H. Warren.
Sec.—H. S. Cooper, Slaughter Bldg., Dallas, Texas.

Treas.—J. B. Walker.

Conv., 1921.

AMERICAN GAS ASSOCIATION, Inc.

Current List No. 39—November, 1920

Rate Increases Secured.

Where information is not secured from company receiving increase, the source of information is noted in brackets. See Cumulative List No. 6, of September, 1920, for explanation of abbreviations.

These Increases Received Too Late for Insertion in Cumulative Rate Increase List No. 6.

FLORIDA

Lakeland: Gas Co. reports increase effective Aug. 1, 1920. New rate: 1st MCF \$2.20—next MCF \$2.15—next MCF \$2.10—next 5 MCF \$2.05—next 10 MCF \$2.00—next 10 MCF \$1.90 per M—disc. 10¢ per M—M. M. Chge. \$1.00. Old rate: 35¢ less per MCF—M. M. Chge. 50¢.

GEORGIA

Atlanta: Co. reports second increase effective Oct. 1, 1920. New rate: 1st 10 MCF \$1.55—next 20 MCF \$1.45—over 30 MCF \$1.35 per M—disc. 10¢ per M 10 days—M. M. Chge. \$1.00 net per customer meter. College Park, Decatur and East Point \$1.65 per MCF—disc. and M. M. Chge. same as Atlanta.

Columbus: Gas Light Co. reports increase effective Aug. 1, 1918. Old rate: 1st 50 MCF \$1.45 gross, \$1.35 net—over 50 MCF \$1.10 gross, \$1.00 net per M—M. M. Chge. 50¢. New rate: 1st 10 MCF \$1.60—next 20 MCF \$1.50—next 20 MCF \$1.40—over 50 MCF \$1.30 per M—disc. 10¢ per M—M. M. Chge. \$1.00. Further increase pending.

ILLINOIS

Beardstown: Co. reports third increase effective Aug. 1, 1920. New rate: 1st 3 MCF \$1.75—next MCF \$1.65—next MCF \$1.50—next 5 MCF \$1.40—next 15 MCF \$1.30—next 25 MCF \$1.20—over 50 MCF \$1.05 per M—disc. 10¢ per M 10 days—M. M. Chge. 75¢ per month—P. P. Meters \$1.65 per MCF.

Belvidere: Illinois Northern Utilities Co. reports increase effective Feb. 1, 1918. New rate: 1st 3 MCF \$1.40—next MCF \$1.35—next MCF \$1.25—next 5 MCF \$1.15—next 15 MCF \$1.05—next 25 MCF 95¢—next 25 MCF 85¢—over 75 MCF 75¢ per M—disc. 10¢ per M. Charges 3, 5, 10 and 20 ft. meters 50¢—30 ft. \$1.00—45 ft. \$1.50—60 ft. \$2.00—80 ft. \$2.50—100 ft. \$3.00—150 ft. \$4.00. Old rate 15¢ less per MCF each block. Second increase effective Aug. 1, 1920. New rate: 1st 3 MCF \$1.70—next MCF \$1.65—next MCF \$1.55—next 5 MCF \$1.45—next 15 MCF \$1.35—next 25 MCF \$1.25—next 25 MCF \$1.15—over 75 MCF \$1.05 per M—disc. 10¢ per M. Charges unchanged.

De Kalb: Illinois Northern Utilities Co. All rates same as Belvidere.

Dixon: Illinois Northern Utilities Co. All rates same as Belvidere.

Geneseo: Illinois Northern Utilities Co. reports increase effective Feb. 1, 1918. New rate: 1st 3 MCF \$1.50—next MCF \$1.45—next MCF \$1.35—next 5 MCF \$1.25—next 15 MCF \$1.15—next 25 MCF \$1.05—next 25 MCF 95¢—over 75 MCF 85¢ per M—disc. 10¢ per M. Charges 3, 5, 10 and 20 ft. meters 50¢—30 ft. \$1.00—45 ft. \$1.50—60 ft. \$2.00—80 ft. \$2.50—100 ft. \$3.00—150 ft. \$4.00. Old rate 15¢ less per MCF each block. Second increase effective Aug. 1, 1920. New rate: 1st 3 MCF \$1.80—next MCF \$1.75—next MCF \$1.65—next 5 MCF \$1.55—next 15 MCF \$1.45—next 25 MCF \$1.35—next 25 MCF \$1.25—over 75 MCF \$1.15—disc. 10¢ per M. Charges unchanged.

Mendota: Illinois Northern Utilities Co. All rates same as Geneseo.

Morrison: Illinois Northern Utilities Co. All rates same as Geneseo.

Rock Falls: Illinois Northern Utilities Co. All rates same as Belvidere.

Sterling: Illinois Northern Utilities Co. All rates same as Belvidere.

Sycamore: Illinois Northern Utilities Co. All rates same as Belvidere.

Taylorville: Co. reports second increase effective May 1, 1919. New rate: 1st 2 MCF \$1.55—next MCF \$1.40—next MCF \$1.30—next MCF \$1.20—next 5 MCF \$1.15—next 15 MCF \$1.10—next 25 MCF \$1.05—over 50 MCF \$1.00 per M—disc. 10¢ per M 10 days—M. M. Chge. 50¢ per month—P. P. Meters \$1.55 per MCF. Third increase effective Aug. 1, 1920. New rate: 1st 2 MCF \$1.85—next MCF \$1.65—next MCF \$1.45—next MCF \$1.40—next 5 MCF \$1.35—over 10 MCF \$1.30 per M—disc. 10¢ per M 10 days—P. P. Meters \$1.75 per MCF.

INDIANA

- Aurora:** Interstate Public Service Co. reports old rate effective June 1, 1912: 1st 5 MCF \$1.50 gross, \$1.25 net—over 5 MCF \$1.00 net per M. First increase effective Nov. 1, 1918, added a Surcharge of 25¢ to above rates. Second increase effective June 1, 1920. New rate: Dom. \$2.25 net per M—Ind. 1st MCF \$2.25 net—next 2 MCF \$2.00—next 2 MCF \$1.75—over 5 MCF \$1.60 net per M—M. M. Chge. \$1.00.
- Bedford:** Interstate Public Service Co. reports old rate: 1st 5 MCF \$1.10—next 5 MCF \$1.00—next 15 MCF 90¢—next 25 MCF 80¢—next 25 MCF 70¢—over 75 MCF 60¢—disc. 10¢ per M—M. M. Chge. 50¢ net. First increase effective Mar. 20, 1920. New rate: 1st 5 MCF \$1.40—next 5 MCF \$1.30—next 15 MCF \$1.20—next 25 MCF \$1.10—over 50 MCF \$1.00 per M—disc. 10¢ per M—M. M. Chge. 50¢ net.
- Franklin:** Interstate Public Service Co. reports old rate same as Bedford. First increase added a Surcharge of 25¢ per M effective July 1, 1918. Second increase effective Sept. 1, 1920. New rate: 1st 5 MCF \$1.85—next 5 MCF \$1.75—next 15 MCF \$1.65—next 25 MCF \$1.55—next 25 MCF \$1.45—over 75 MCF \$1.35 per M—M. M. Chge. \$1.00.
- Greenfield:** Interstate Public Service Co., Natural, reports old rate 50¢ to 35¢ net per MCF block scale—M. M. Chge. 50¢. New rate effective Dec. 25, 1919: 85¢ gross, 75¢ net per MCF—M. M. Chge. 75¢.
- Jeffersonville:** Co. reports second increase effective June 1, 1920. New rate: 1st 5 MCF \$1.75—next 5 MCF \$1.65—next 15 MCF \$1.55—next 25 MCF \$1.45—next 25 MCF \$1.35—over 75 MCF \$1.25 per M—disc. 10¢ per M 10 days—M. M. Chge. 75¢. Supplies also Clarksville and Port Fulton.
- New Albany:** Co. reports second increase effective June 1, 1920. New rate: 1st 5 MCF \$1.70—next 5 MCF \$1.60—next 15 MCF \$1.50—next 25 MCF \$1.40—next 25 MCF \$1.30—over 75 MCF \$1.20—disc. 10¢ per M 10 days—M. M. Chge. 75¢.
- Seymour:** Interstate Public Service Co. reports old rate same as Bedford. New rate effective Mar. 20, 1920: 1st 5 MCF \$1.40—next 5 MCF \$1.30—next 15 MCF \$1.20—next 25 MCF \$1.10—over 50 MCF \$1.00 per M—disc. 10¢ per M—M. M. Chge. 50¢ net.
- Shelbysville:** Interstate Public Service Co. reports old rate same as Bedford except M. M. Chge. 25¢. New rate effective Mar. 1, 1920: 1st 5 MCF \$1.35—next 5 MCF \$1.25—next 15 MCF \$1.15—next 25 MCF \$1.05—next 25 MCF 95¢—over 75 MCF 85¢ per M—disc. 10¢ per M—M. M. Chge. 50¢ net.
- Vincennes:** Central States Gas Co. reports second increase effective Aug. 20, 1920. New rate: 1st 2 MCF \$2.00—next 3 MCF \$1.90—next 5 MCF \$1.80—next 10 MCF \$1.70—over 20 MCF \$1.60 per M—disc. 10¢ per M 15 days—M. M. Chge. \$1.00—B. t. u. 525, monthly average not less than 500. Consumers billed at 525 schedule for gas below 525 from 525 to 510, 100% of standard rate—510 to 500, 90%—500 to 490, 70%—490 to 480, 60%—480 to 470, 50%—470 to 460, 40%—460 to 450, 30%—450 to 440, 20%—440 to 430, 10%—430 to 400, 0.

IOWA

- Eagle Grove:** Northern Iowa G. & E. Co. reports increase effective May 1, 1920. Old rate: \$1.50 gross, \$1.40 net per M. New rate: \$1.85 net per MCF.
- Ottumwa:** Gas Co. reports increase effective Aug. 1, 1920. New rate: 1st 5 MCF \$1.90—next 5 MCF \$1.80—next 5 MCF \$1.70—next 10 MCF \$1.65—over 25 MCF \$1.60 per M—disc. 10¢ per M—M. M. Chge. \$1.00 per meter per month. Old rate: 30¢ less per M first block to 50¢ less last block—M. M. Chge. 50¢. Co., being refused \$2.00 P. P. Meter rate, is removing them unless rate is authorized.

MASSACHUSETTS

- Adams:** Gas Light Co. reports increase effective Oct. 1, 1918. Old rate: \$1.15 gross, \$1.05 net per MCF—M. M. Chge. \$6.00 per year. New rate: 1st 10 MCF \$1.35—next 10 MCF \$1.25—over 20 MCF \$1.15 per M—disc. 10¢ per M 10 days—M. M. Chge. unchanged. Second increase effective June 1, 1920. New rate: 1st 10 MCF \$1.75, disc. 10¢ per M 10 days—next 10 MCF \$1.55 net—over 20 MCF \$1.45 net per M—M. M. Chge. unchanged.
- Leominster:** Gas Light Co. reports increase effective April 1, 1918. Old rate: 1st 2 MCF \$1.40—next 48 MCF \$1.35, disc. 10¢ per M 10 days—next 50 MCF \$1.05 net—over 100 MCF 85¢ per M—net rates 10 days—M. M. Chge. \$6.00 per year. New rate: 15¢ increase each block, terms and M. M. Chge. unchanged. Second increase effective Sept. 1, 1920. New rate: 1st 10 MCF \$1.95—next 10 MCF \$1.85—over 20 MCF \$1.75 per M—disc. 10¢ per M 10 days—M. M. Chge. \$6.00 per year.

KENTUCKY

- Shelbysville:** Kentucky Utilities Co. reports increase effective May 1, 1920. Old rate: \$1.25 gross, \$1.15 net per MCF. New rate: \$1.75 gross, \$1.65 net per MCF.

MICHIGAN

- Adrian:* Lenawee County G. & E. Co. reports increase effective May 1, 1920. Old rate: \$1.10 gross, \$1.00 net per MCF—M. M. Chge. 50¢. New rate: \$1.35 gross, \$1.25 net per MCF—M. M. Chge. 50¢.
- Hancock:* Co. reports second increase effective June 1, 1920. New rate: \$1.75 gross, \$1.65 net per MCF—M. M. Chge. 25¢. City has granted a third increase to \$2.00 gross, \$1.90 net pending appeal to P. U. C.
- Sturgis:* Gas Co. reports increase effective July 1, 1920. Old rate: 1st 10 MCF \$1.35—over 10 MCF \$1.10 per M—disc. 10¢ per M—M. M. Chge. 75¢ per month. New rate: 1st 10 MCF \$2.00—over 10 MCF \$1.75 per M—disc. 10¢ per M—M. M. Chge. 75¢ per month. Increase granted for two years at a special election by over three-fifths majority. Original application for Service Charge defeated 7 to 1. Plant was then shut down when above increase was voted. City refused to go before P. S. C.

MISSISSIPPI

- Biloxi:* Gulf Cities Gas Co. reports increase effective Aug., 1920. Old rate: \$1.50 gross, \$1.40 net—P. P. Meters \$1.50 per M—M. M. Chge. 50¢. New rate: 1st 5 MCF \$1.75—next 10 MCF \$1.60 per M, disc. 10¢ per M—over 15 MCF \$1.75 net per M—M. M. Chge. \$1.00—P. P. Meters \$1.75 per M.

MISSOURI

- Lexington:* Missouri Gas & Electric Service Co. reports old rate: 1st 8 MCF \$1.25—next 2 MCF \$1.10—over 10 MCF \$1.00 net per M—M. M. Chge. 50¢ per meter per month. First increase effective Aug. 15, 1918. New rate: 1st 5 MCF \$1.50—next 5 MCF \$1.30—over 10 MCF \$1.10—penalty 10¢ 10 days. Second increase effective Sept. 1, 1920. New rate: 1st 5 MCF \$1.90—next 15 MCF \$1.50—over 20 MCF \$1.25—penalty 10¢ 10 days—M. M. Chge. \$1.00 per meter per month.
- Marshall:* Co. reports second increase effective Sept. 1, 1920. New rate: 1st 5 MCF \$1.90—next 15 MCF \$1.50—over 20 MCF \$1.25 per M—penalty 10¢ 10 days—M. M. Chge. \$1.00 per meter per month.

NEBRASKA

- Kearney:* Central Power Co. reports old rate: 1st 5 MCF \$1.75—next 5 MCF \$1.67—over 10 MCF \$1.50 per M—disc. 10¢—M. M. Chge. 50¢ per meter per month. First increase effective Jan. 1, 1920: 25¢ per MCF each block—disc. and M. M. Chge. same. Second increase effective Aug. 1, 1920. New rate: 1st 5 MCF \$2.25—next 5 MCF \$2.17—over 10 MCF \$2.00 per M—disc. 10¢—M. M. Chge. \$1.00 per meter per month.
- Nebraska City:* Gas Co. reports second increase effective Aug. 1, 1920. New rate: 1st 2 MCF \$2.00—next 3 MCF \$1.85—next 5 MCF \$1.65—over 10 MCF \$1.20 per M—disc. 10¢ per M 10 days—M. M. Chge. \$1.00, 10 days. B. t. u. requirements 550.

NEW JERSEY

- Atlantic City:* Gas Co. reports increase effective June 26, 1918. Old rate: \$1.00 gross, 90¢ net per MCF. Surcharge of 15¢ allowed per M. Second increase effective Jan. 9, 1919. Surcharge increased 10¢ per M making rate \$1.25 gross, \$1.15 net, and S. Chge. 2 and 3 lt. meters 25¢, 10 lt. 30¢, 20 lt. 40¢, 30 lt. 50¢, 45 lt. 65¢, 60 lt. 80¢, 100 lt. \$1.20, 150 lt. \$1.70. Third increase effective Oct. 1, 1920. New rate: \$1.60 gross, \$1.50 net per MCF with following rebates: over 600 MCF per year 5¢ per M—over 900 MCF 10¢—over 1200 MCF 20¢—over 1800 MCF 30¢ per M—S. Chge. dropped.

NEW YORK

- Mechanicville:* Light, Heat & Power Co. reports increase effective Sept. 1, 1920. New rate: \$2.00 per MCF—disc. on bills of \$1.00 or less 10% D. P., over \$1.00 25%—S. Chge. 50¢ per meter per month—P. P. Meters \$1.50 per MCF. Old rate same less S. Chge.
- Penn Yan:* Gas Light Co. reports increase effective July 22, 1918. Old rate: \$1.80 gross, \$1.60 net per MCF. New rate: 1st CCF 75¢—all over 10¢ per CCF—disc. 1¢ per C 10 days. Second increase effective June 27, 1920. New rate: 1st CCF 75¢—next 19 CCF 10¢—next 20 CCF 17¢—over 40 CCF 15¢ per C—disc. 1¢ per C 10 days.
- Rensselaer:* Co. reports second increase effective Sept. 10, 1920. New rate: \$1.50 net per MCF plus S. Chge. of 75¢ per month regardless of quantity consumed.

TENNESSEE

- Jackson:* Citizens Gas Lt. Co. reports increase effective Jan. 1, 1919. Old rate: \$1.50 gross, \$1.35 net per MCF. New rate: \$1.65 gross, \$1.50 net per MCF. Further increase pending.

TEXAS

Dallas: Natural Gas Co. reports increase effective Sept. 15, 1920. Old rate: 20¢ gross per MCF. New rate: 75¢ per MCF—disc. 10% 10 days—M. M. Chge. 50¢ per meter per month.

VERMONT

Bennington: Twin State G. & E. Co. reports third increase effective Sept. 1, 1920. Old rate: \$1.60 gross, \$1.50 net per MCF. New rate: 1st 2 MCF \$2.25—next 3 MCF \$2.00—next 5 MCF \$1.85—next 15 MCF \$1.75—over 25 MCF \$1.65 per M—disc. 10¢ per M 10 days—M. M. Chge. 75¢. Second increase effective Sept. 1, 1918: 40¢ less per MCF each block—M. M. Chge. and disc. same.

Brattleboro: Co. reports third increase effective Sept. 1, 1920. Old rate \$1.54 per MCF—1st increase to \$1.60 gross, \$1.50 net. New rate: 1st MCF \$2.25—next 3 MCF \$2.00—next 5 MCF \$1.85—next 15 MCF \$1.75—over 25 MCF \$1.65 per M—disc. 10¢ per M 10 days. M. M. Chge. 50¢. Second increase effective Sept. 1, 1918. 40¢ less per MCF each block. M. M. Chge. and disc. same.

VIRGINIA

Richmond: City of Richmond reports increase effective Aug. 1, 1920. Old rate: \$1.00 per MCF—penalty 5% 10 days. New rate: \$1.30 per MCF—same penalty.

WISCONSIN

Chippewa Falls: Co. reports third increase effective Oct. 3, 1920. New rate: 1st 2 MCF \$2.45—next 3 MCF \$2.35—next 5 MCF \$2.25—next 20 MCF \$2.10—over 30 MCF \$1.90 per M—disc. 10¢ per M—M. M. Chge. \$1.00 per month.

Eau Claire: Co. reports fourth increase effective Oct. 3, 1920. New rate: 1st 5 MCF \$2.40—next 5 MCF \$2.20—next 20 MCF \$2.00—next 30 MCF \$1.80 per M—disc. 10¢ per M—M. M. Chge. \$1.00 per month.

La Crosse: Co. reports fourth increase effective Oct. 3, 1920. New rate: 1st 5 MCF \$2.15—next 5 MCF \$2.00—over 10 MCF \$1.90 per M—disc. 10¢ per M—M. M. Charges (net): 3 and 5 lt. meter \$1.00, 10 lt. \$2.00, 20 lt. \$3.50, 30 lt. \$5.00, 45 lt. \$7.00, 60 lt. \$8.00, 100 lt. \$14.00, 200 lt. \$20.00.

(Continued from page 684)

Discussion of Accounting Section Papers and Reports

form in advance of the meeting. We trust that all Accounting members will co-operate in this plan, by advising Headquarters of the subjects listed on the Section's program in which they are interested. Advance copies of the reports can then be forwarded them as soon as available and a full and intelligent discussion obtained of each subject as it is presented at the Convention.

Don't wait until the time of the Convention to get a copy of your Section's papers—ask for them *now*.

Report of the Nominating Committee

The Nominating Committee of the Accounting Section have submitted their recommendations for Chairman and Vice-Chairman of the Section to serve during the next Association year as follows:

For Chairman—W. H. Pettes, Newark, N. J.

For Vice-Chairman—Ewald Haase, Milwaukee, Wis.

Action will be taken on the above nominations at the Tuesday session of the Accounting Section.

Remember, when the Fourth Red Cross Roll is called November 11-25 of this year, that your dollar helps to make Health Centers possible, that your dollar helps to spread the propaganda of GOOD HEALTH throughout the country, that your dollar is helping to increase the span of man's life, and renew your membership in the American Red Cross.

QUESTION BOX

THE questions and answers on accounting subjects in the Question Box have been contributed by the Accounting Section Committee on State Representatives, Mr. J. W. Heins, Chairman, who will be glad to receive inquiries from any of our members on their accounting problems.

Questions and answers under "General Problems" are the result of inquiries received at Association headquarters and answered through the committees of the various Sections or from the Association files.

Answers from our members are solicited on questions which come within their experience and such answers should refer to code number of Question, A-1, G-1, etc.

—Editor.

ACCOUNTING PROBLEMS.

A-10

Please advise practice of member companies relative to insurance on gas apparatus, particularly water gas machines, similar to the standard form of boiler insurance. We would appreciate the names of companies which handle this type of indemnity policy.

ANSWERS.

Mr. Chas. M. Cohn, Consolidated Gas, Electric Light & Power Co., Baltimore, Md.

We do not carry any insurance on our gas generating apparatus other than regular fire insurance. The regular form of explosion policies in connection with Workmen's Compensation and Public Liability Insurance may be utilized to cover an anticipated damage from an explosion of generating apparatus. The cost of these three kinds of insurance, however, would be rather high. All of the regular stock companies provide these various insurance coverages. None of them will have the same application to generating apparatus only as the boiler insurance policy has to the boiler, which is the information which one of your company members is apparently seeking.

A-11

We have been giving considerable thought lately to changing the method in which we are billing customers for service rendered. At present we only have one discount period, from the 1st to the 10th of the month, and this results in a very large peak in our work. In order to reduce this peak, we are considering one plan which will divide the city into three zones, having one discount period for the one zone, for example, for the first ten days; another, for the next ten days, and the third for the last ten days. Another plan is to have a continuous reading and make every day the beginning of a ten-day discount period.

We would appreciate receiving information as to the experience member companies have had with similar plans and which plan has worked out best in practice.

GENERAL PROBLEMS.

G-27 (See September Issue, page 590.)

ANSWERS.

Mr. J. P. Conroy, Chairman, Division of Lighting Appliance Manufacturers

1. What are the manufacturers doing towards getting out a fixture which can be used for commercial business?

There are several good commercial fixtures on the market, but a regular inverted gas arc lamp seems to be the most universal, satisfactory commercial fixture, and we

don't know of any improvement that can be made on them. If so, it would have been made, and will be made as fast as such improvement can be found.

2. Why should combination companies, gas and electric, continue to push the sale of electricity for lighting?

This question we think is a question more or less to be answered by the management of combination companies, but to our mind it is very unadvisable for combination companies to be pushing the sale of electric light as against gas lighting which only means piling up a peak load and increased investment in electrical equipment, while gas and its storage capacity could take care of any extra peak load without effort.

3. What is the gas consumption in the two mantles of a 2-light semi-indirect fixture and also in the pilot?

A regular inverted mantle requires from $3\frac{1}{2}$ to 4 feet of gas per hour to properly incandescent it, so this would mean the consumption on an ordinary 2-light semi-indirect would be varied somewhat by the use of shorter or longer inverted mantles.

The average consumption of a pilot light is from 4 to 5 cubic feet every four hours.

4. What are the actual costs of operating commercial gas arcs with gas at \$1.00 per thousand, as compared with the competitive sizes of electric lamps for various rates per kilowatt hour?

The only way that a competitive comparison can be made is to take a known amount of lumination per hour and the cost to produce same and compare this against other units. For instance a Humphrey Radio-30 gas arc lamp will produce 1,000 lumen hours of light at a cost of 0.32 of a cent per hour, gas at \$1.00 per thousand, while a Tungsten lamp of 100-150 or 250 Mazda type will produce 1,000 lumen hours of light at a cost of about 1.53 of a cent per hour, electricity at 10¢ per kw., while a 750-watt nitrogen will produce 1,000 lumen hours of light at a cost of 0.954 of a cent per hour of electricity at 10¢ per kw. Those figures do not take into consideration cost of maintenance of gas gas lamp or renewal of electric lamp.

In case of higher cost of electricity or gas, or lower cost, these figures can be increased or reduced according to rate.

5. We think in order that gas companies maintain a high standard of efficiency and give good service all gas lamps should be under maintenance by the gas company.

6. We think all lamps should be inspected at least every ninety (90) days.

7. Number seven is a question best replied to by a gas company employee.

Mr. Townsend Stites, Welsbach Co., Gloucester, N. J.

1. The 6-mantle semi-indirect fixture, with a 14-inch bowl is about to be placed on the market. An order has been accepted by the manufacturers for 100 of these fixtures for prompt delivery.

2. The gas consumption of 2-light horizontal burner is 5.12 cubic feet per hour. The consumption of pilot filament tip $1\frac{1}{12}$ cubic feet. Tests made on water gas at 25/10 pressure. B. t. u. 595; specific gravity 0.644; gas candlepower 19.58.

3. C. E. Z. Light. 70.2 mean spherical candlepower. Gas consumption 3.16 cubic feet. Efficiency, 22.2 candlepower per cubic foot. Tests made on water gas at 25/10 pressure. B. t. u. 585; specific gravity 0.623; gas candlepower 19.35.

No. 6 Reflex Light. 83.3 mean spherical candlepower. Gas consumption 4.55 cubic feet per hour. Efficiency 18.2 candlepower per cubic foot. Above tests made on water gas at 25/10 pressure. B. t. u. 582; specific gravity 0.637; gas candlepower 17.4.

6. How often should semi-indirect fixtures be inspected? If the fixture is properly installed and properly adjusted, an inspection once in 60 days should be sufficient to keep the lamp in good working condition.

G-28

Information from our members will be appreciated on the following questions received in connection with gas lighting:

1. With the increased use of lower B. t. u. gas, what is the best method of providing a satisfactory light on outlets which are seldom used?

2. Please give rule of thumb methods for computing illumination, i. e.,

necessary number of gas arcs per unit, required of various types in connection with several kinds of business.

3. What would be about the average lighting hours per year of lamps in the living room, dining room and kitchen of a house?

4. Would it be possible if district governors were installed properly throughout the whole distribution system, and a perfect pressure of good gas maintained, to have lighting burners without either air shutters or adjustment, and could they be made much simpler and more ornamental? And if this could be done, would not the business to be obtained amply repay the expense of installing a distribution system of this kind?

5. Why do electric companies, and even combination companies, continue to sell electric lamps practically at cost or furnish them free while they sell gas mantles at 100 per cent. above the cost price?

6. Could not the gas lighting business be boosted and be immensely increased everywhere if the American Gas Association appointed a committee of experts to select a special line of semi-indirect and other modern gas fixtures that could be purchased wholesale by gas companies, through the Association, at a saving in cost and sold during a comprehensively devised national campaign?

7. What causes most pilot outage?

8. What are gas companies doing to hold their commercial lighting?

9. Why do mantles blacken?

10. Why do gas lamps roar, and what is the proper way to correct?

G-29

We are going to lay a 12-inch lead caulked, single groove cast iron gas main and carry the pressure intermediate, say 8 inches. Kindly advise if we can raise this pressure to 5 or 6 pounds later on, and will this joint take care of same. What would you suggest in a condition of this kind?

ANSWERS.

Mr. F. C. Weber, H. L. Doherty & Co., 60 Wall Street, New York, N. Y.

In this connection I can say that a couple of years ago we laid a few miles of 6 and 8-inch cast iron pipe with lead joints, and have since submitted this main to pressures up to 10 or 12 pounds. In general we have found no great difficulty on this account. There are a few leaks which may have been caused by soil conditions or frost, but we did not consider them serious. I might say that this main has already been used under a pressure of at least a few pounds and when originally laid was tested for about 50 pounds.

I should say that a company laying a cast iron main with lead joints for use under about 8 inches pressure with the possibility of later increasing the pressure to 5 or 6 pounds, would be quite safe in doing so if when the pipe is originally laid it is tested under at least 25 or 30 pounds pressure.

Mr. C. C. Simpson, Jr., Consolidated Gas Co. of New York, New York, N. Y.

The joints should be caulked with lead wool and soaped yarn (which has been air dried, so that there is no moisture present). It will be better to caulk both the yarn and lead wool with pneumatic tools if air is available. Providing proper attention is given to the caulking, I see no reason why a pressure of 5 or 6 pounds could not be carried on a main laid with lead wool joints.

Mr. B. B. Brown, Milwaukee Gas Light Company, Milwaukee, Wis.

We have a good many miles of lead jointed bell and spigot main laid many years ago on which we are carrying 4 to 6 pounds pressure, but on all our new lines for intermediate pressures of 5 to 6 pounds we reinforce the lead joints with a cast iron clamp

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ring and square braided hemp packing filled with soap. This absolutely prevents any displacement of the lead and also prevents any leaks due to straining of the joint from settlement.

In addition, of course, it is a good deal cheaper to put these clamps on at the time these mains are being installed, though on the many miles of old main that we have changed over from low pressure to intermediate pressure, we have only found it necessary to put clamps on a very few of the joints.

G-30

I am of the opinion that a number of the large gas companies have discontinued the installation of 4-inch gas mains and are now operating on a 6-inch minimum basis. I would appreciate it if you would kindly send me any information you may have on this subject.

ANSWERS.

Mr. Walton Forstall, Cast Iron Pipe Standards Committee

I wrote to the companies in New York, Chicago, Boston and Brooklyn for the percentage of certain size mains laid during the last three years. The result of this inquiry is shown in the table, which shows very conclusively that with the exception of Boston and Brooklyn, the use of 4-inch in large cities is quite negligible. You will notice that in 1919, in the case of Boston, Brooklyn and Philadelphia, the percentage of 4-inch pipe increased over the two previous years. In the case of Philadelphia, and possibly in the case of the other two cities, this is due to two reasons: first, to a smaller actual amount of pipe used in 1919 than in 1917, and also to the greatly increased cost of cast iron, tending to increase the amount of 4-inch pipe laid.

There are two reasons why a 6-inch main might be preferred to a 4-inch:

1. The question of capacity. As to this, there are many places even in a large city, where a 4-inch main can be laid with practically absolute assurance that no larger capacity will be needed.

2. The question of strength. The relative strength of 6-inch to 4-inch against the underground strains for Philadelphia, is shown by a table on page 329 of "A Manual of Gas Distribution." Although the breaks per mile of 0.11 for 4-inch as against 0.03 for 6-inch shows a very great relative immunity for the larger size, yet the absolute number of breaks in 4-inch as compared with 6-inch would certainly not, at the present time, warrant the laying of 6-inch mains for the reason of strength.

From the above it seems evident that the distribution engineer of a large company at present is following the lines of good practice when he lays more 6-inch than 4-inch, but because of the present high prices of cast iron pipe, he should be certain that he does not lay 6-inch where 4-inch would do as well.

SMALL MAINS LAID.
Percentage of Total Yearly Mileage.

	4-inch			6-inch			8-inch		
	1917	1918	1919	1917	1918	1919	1917	1918	1919
New York City	0.3	0.09	0.6	38.0	23.6	99.0	47.0	3.7	0.4
Chicago	—	0.12	0.11	93.0	87.0	81.0	—	0.43	—
Philadelphia	3.2	5.6	15.2	90.6	74.5	78.3	0.2	2.4	0.15
Boston	39.0	11.1	22.1	44.7	34.7	31.2	2.5	28.2	41.7
Brooklyn	4.2	11.3	16.5	70.2	42.1	46.9	6.4	1.9	12.9

G-31

We are looking for information regarding the testing of purifying material (iron oxide and shavings), for alkalinity and acids. Will you please send us some formula or describe a method of making these tests?

In case a batch of purifying material is acid, what is the best method of neutralizing them?

**THE RED CROSS HOME SERVICE joins hands with others to
make communities healthier and happier.**

ANSWERS.**Mr. C. H. Stone, Chairman, Purification Committee**

The oxide should be ground, if possible, to pass an 80-mesh screen. Weigh out about 2 grams into a large Erlenmeyer flask and extract with successive small portions of water, shaking thoroughly with each portion and decanting through a No. 44 Whatman filter paper. When 2 liters of water have been used, titrate the filtrate with tenth normal sulphuric acid, using phenolphthalein as an indicator. This will give the alkali present in caustic form. To determine that present as carbonates, heat a fresh, weighed portion of the oxide with hydrochloric acid and water in a closed flask and draw off the carbonic acid formed by means of an aspirator. It is then caught in a tared potash bulb. The incoming air is drawn through a tower filled with soda lime and then through a dropping funnel, through which, also, the 1:1 HCl is added. The Erlenmeyer is heated gently until all the sample is dissolved and the solution starts to boil. From the Erlenmeyer the gas is passed through a weak solution of silver nitrate in a bubbling bottle, thence through a calcium chloride drying tube and thence to the potash bulb. The increased weight of the latter gives the amount of carbonic acid formed, and from this can be calculated the calcium carbonate originally present.

For the determination of acids the same procedure should be followed as in the case of caustic alkali, save that the titration should be made with tenth normal alkali.

In cases where a batch of purifying material is acid, I have always used lime for neutralizing the same. Some experiments on a small scale have lately lead me to believe that possibly calcium carbonate would do the work equally well, and if so, would be cheaper. This, however, has not been tried, as yet, on a large scale.

G-32

Is it possible to obtain good results from a 5-foot carburetted water gas set, using the up-run method of operation only, with coke for fuel?

ANSWERS.**Mr. A. C. Howard, United Gas & Electric Engineering Corp., New York, N. Y.**

When operating a water gas set of any diameter whatsoever using up-runs only, it is impossible to control the temperatures of the various parts of the fire so accurately as can be done by running down for a part of the time. Consequently it is not possible to secure as good fuel or oil results when operating on up-runs only. If no down-runs are made, it is necessary to clean the fires much more frequently and the capacity of an up-run set is much less than that of a set on which the run can be reversed, other conditions being the same.

Many small gas companies install a 4-foot, and even 5-foot sets, without reverse steam connections. This is probably because the send-out of these companies is so small that the set is operated only a small percentage of the time and, therefore, as the results are likely for this reason to be poor in any event, it is considered an unnecessary expense to try to improve them by installing reverse steam connections.

This reasoning is probably correct, for a very small company having a 4-foot set, but it is doubtful whether there is ever a case where a company needs a 5-foot set that it would not be a good investment to include reverse steam connections with the equipment.

If a small company is about to install a 5-foot set and can at the time afford to include reverse steam connections, I think that the generator and carbureter should be so located with respect to each other that the reverse steam connections can be installed at a later date.

If a small company already has a 5-foot set without reverse steam connections, the capacity and efficiencies of the set can be increased by adding these connections unless the daily send-out is very small in ratio to the capacity of a 5-foot set.

During the past year the number of families aided by Home Service sections of the American Red Cross—both by relief and the giving of information—was 466,000; while during the same period Home Service expenditures for family relief amounted to \$9,550,000.

(Continued from page 690)

realize the serious conditions that face all public utilities."

This is followed by a simple declaration of the various reasons why the company is asking for an increase in rates, and other advertisements take up the question in greater detail, covering every factor which enters into a consideration of the subject.

That the company feels well repaid for the expense incurred in living up to its policy of taking everything to the people through the newspapers, is to be expected in view of the fact that there is now a greater and more intelligent interest in the affairs of the company than ever before and there is no opposition on the part of the public to the increase asked for.

What opposition there is comes from two men in the city administration who are endeavoring to buck the tide of public opinion favorable to the company, and it is hoped that by the time this appears in print these two recalcitrant individuals will have been entirely won over to the side of the majority.

The experience of the Charles City Gas Company is that advertising of the right sort pays big in good will dividends. There was a time when all advertising was considered to be more or less of a speculation or lottery. This day has happily passed, however, and there has grown up a steady conviction based on tangible results that advertising with a sound basis of truth is an investment of the highest character.

The World's Roll Call—November 11-25!

Do Our Window Display Suggestions Help You?

The window suggestions which appear in each issue of the A. G. A. MONTHLY's Commercial Section are designed to help the Sales Manager in planning his window displays.

This Service will be much more helpful if companies will suggest to Association headquarters just the kind of displays they need. If ours are too elaborate and are not just what our members

can use to the best advantage, tell us, so we can make them more applicable to your needs.

The window display offers a wonderful medium for talking to your customers and this space is too valuable not to be used to the fullest possible extent.

Suggest to us the kind of displays which will help you most and we will do everything possible to meet your views.

Twelve hundred and thirteen Liberty Bonds, subscribed for by soldiers and sailors while in service, were delivered to their owners during April and May through efforts of the American Red Cross. During the same period, 1,011 other service men asked Red Cross help in obtaining their bonds. Cooperation between the Red Cross and War Department is expediting delivery of thousands of bonds delayed for months.

(Continued from page 700)

69. The Improved Appliance Co., Brooklyn, N. Y.
70. Rathbone, Sard & Co., Albany, N. Y.
71. The Estate Stove Co., Hamilton, Ohio
72. *The Gas Age*, New York, N. Y.
73. *The Gas Record*, Chicago, Ill.
74. *The Gas Industry*, Buffalo, N. Y.
75. *The American Gas Engineering Journal*, New York, N. Y.
76. Elliott-Fisher Co., Harrisburg, Pa.
77. Underwood Typewriter Co., New York, N. Y.
78. Addressograph Co., Chicago, Ill.
79. Library Bureau, Boston, Mass.
80. Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich.
81. Burroughs Adding Machine Co., Detroit, Mich., and New York, N. Y.
82. Burroughs Adding Machine Co., Detroit, Mich., and New York, N. Y.
83. The Lattimer-Stevens Co., Columbus, Ohio.
84. The Cutler-Hammer Mfg. Co., Milwaukee, Mich., and New York, N. Y.
85. The Sprague Meter Co., Bridgeport, Conn.
86. Bacharach Industrial Instrument Co., Pittsburgh, Pa.
87. The Koppers Co., Pittsburgh, Pa.
88. S. R. Dresser Mfg. Co., Bradford, Pa.
89. United Lead Co., New York, N. Y.
90. Superior Meter Co., Brooklyn, N. Y.
91. The U. G. I. Contracting Co., Philadelphia, Pa.
- 92.
93. M. T. Davidson Co., New York, N. Y.
94. Precision Instrument Co., Newark, N. J.
95. National Tube Co., Pittsburgh, Pa.
96. Connelly Iron Sponge & Governor Co., Chicago, Ill., and New York, N. Y.
- 97.
- 98.
99. Acme Brass Works, Detroit, Mich.
100. Monroe Calculating Machine Co., New York, N. Y.
101. Pittsburgh Meter Co., East Pittsburgh, Pa.
102. American Meter Co., New York, N. Y.
103. Metric Metal Works, Erie, Pa.
104. The Roberts Brass Mfg. Co., Detroit, Mich.
105. The Bartlett Hayward Co., Baltimore, Md.
106. Quigley Furnace Specialties Co., Inc., New York, N. Y.
107. Republic Flow Meters Co., Chicago, Ill.
108. The West Gas Improvement Co. of America, Inc., New York, N. Y.
109. Equitable Meter Co., Pittsburgh, Pa.
110. H. Mueller Mfg. Co., Decatur, Ill., and New York City.
111. The Western Gas Construction Co., and New York, N. Y.
112. John J. Griffin & Co., Philadelphia, Pa.

FIGURES THAT TALK.

More than 26,000 men are still in hospitals as the result of the war. Your membership helps the Red Cross make their lives happier.

Last year in the United States the Red Cross aided more than 30,000 victims of flood, fire, tornado or other unavoidable disaster.

1,000,000 persons have learned the right way—the Red Cross way—of cheating death from accidents.

92,000 women and girls last year UNDER RED CROSS NURSES completed courses of instruction in home care of the sick.

The American Red Cross, in one month in 1920, helped 525,643 of the stricken people of Europe, 423,888 adults and 101,755 children.

During the week ending July 9th, 1920, American Red Cross service was rendered to patients as follows:

Naval Hospitals	2,966
Eight Psychiatric Institutions.....	1,070
Public Health Hospitals.....	7,837
Contract Hospitals	9,606
Army Hospitals	4,935
Total	26,414

Employment Bureau

SERVICES REQUIRED

WATER GAS—Experienced water gas maker wanted. Gas Works vicinity of New York. Address—American Gas Association, 130 East Fifteenth Street, New York, N. Y.

Key No. 4

WANTED—Thoroughly experienced gas appliance salesman. State age, reference and salary expected. Address—American Gas Association.

Key No. 7

WANTED—Man with experience in the selection of leather and the manufacture of gas meter diaphragms, to take charge of and develop a shop for the making of diaphragms. A good opportunity for the right man. Address—The Laclede Gas Light Company, 1017 Olive Street, St. Louis, Missouri.

Key No. 9

WANTED—A syndicate operating a number of small coal and water gas plants requires an assistant in the Engineering Department. Must be an accurate and rapid draftsman with some experience in plant construction and operation. Unusual opportunity for training and experience with good future. In reply state fully experience, qualifications and salary desired, in order for application to receive attention. Address—A. G. A.

Key No. 11

SERVICES OFFERED

WANTED—Manager of Gas Plant in small western city; one who can make success of coal gas, distributing system and commercial department. Plant new; rates profitable; very attractive residence city, with unusual advantages and beautiful surrounding country. Give in confidence, experience, salary, references. Address—A. G. A.

Key No. 10

WANTED—Position as gas engineer or manager by a man of large experience in both capacities in manufacture and distribution of coal or water gas. 38 years of age with excellent references. Address—American Gas Association, 130 East 15th Street.

Key No. 103

WANTED—Young man desires a position with opportunities. Present location 5 years and cannot go higher. Thoroughly trained and experienced in water gas operation. New business and management. Address—American Gas Association.

Key No. 104

WANTED—Young man 32, experienced manager and office manager desires position with a combination company. Salary \$250.00 per month. Address—American Gas Association.

Key No. 106

WANTED—Position as superintendent wanted by technical man, married, 30 years of age, experienced in manufacture of water gas and high and low pressure distribution. Can furnish best of references. Address—American Gas Association, 130 East Fifteenth St., New York, N. Y.

Key No. 108

WANTED—Position as Manager or Assistant in medium size town. Has had 15 years experience in coal and water gas and electric operation. Technical graduate. Any location. Address—American Gas Association.

Key No. 109

WANTED—Position as Industrial Power and Fuel Engineer. Technical engineer and salesman of excellent qualifications for industrial power and fuel sales. Now employed \$3000. Address—A. G. A.

Key No. 111

WANTED—Position as Superintendent of a Coal and Water Gas Plant having a practical experience in the manufacture of same. Age 44 years and married. Salary \$250 per month. A-1 references, can take up duties at once. Address A. G. A.

Key No. 112

WANTED—A position with a gas appliance company having need for an all around man experienced in development and selling. Can furnish best of references. Address—A. G. A.

Key No. 116

POSITION WANTED—As General Superintendent or Engineer of good-sized company, by well known technical graduate of 18 years connection with the gas business. Experienced in every branch of the industry and has made good. Has been superintendent of one large company and manager of other smaller ones. Has himself laid mains, made gas, set ranges, purchased and sold appliances, etc., so that he knows the difficulties and the things to avoid. Noted for his ability to handle men. Well read and up-to-date in every particular. Address—A. G. A.

Key No. 117

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC.,
REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, of American
Gas Association MONTHLY, published monthly at Easton, Pa., for October 1, 1920.

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss:

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Louis Stotz who, having been duly sworn according to law, deposes and says that he is the Business Manager of the American Gas Association MONTHLY, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, American Gas Association, Inc., 130 East 15th St., New York.

Editor, none.

Managing Editor, none.

Business Manager, Louis Stotz.

2. That the owners are: (Give names and addresses of individual owners, or if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent. or more of the total amount of stock.)

American Gas Association, Inc. No stock issued.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent. or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

There are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner and that this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is not required.

(This information is required from daily publications only.)

(Signed) LOUIS STOTZ, *Business Manager.*

Sworn to and subscribed before me this 24th day of September, 1920.

[SEAL]

(Signed) EDGAR S. MURRAY.

(My Commission expires March 30, 1922.)

Are You a Member of the Red Cross?

(Continued from page 706)

With the street railway and pipe-owning companies and the lead-cable interests all working together in harmony, assisted by the Bureau of Standards, a neutral body, conditions are most favorable for determining the facts relating to electrolysis. It is only by cooperation of this nature that complex problems involving the welfare of so many interests

can be adequately dealt with. With this arrangement for cooperation it is not unreasonable to hope that ultimately the American Committee on Electrolysis will be able to report definitely on all methods of mitigation, describing the advantages and limitations of each, and so far as possible recommend suitable standards of practice.



WHY A ROLL CALL—NOW

Because the American Red Cross is working aggressively for the control of disease, for the upbuilding of the nation's health, and to meet the physical needs disclosed by unfitness for service of more than one half of the youth of the country.

Because it preserves the fine spirit of national service called into being by our participation in the war.

Because, through the Junior Red Cross, it develops among our children that spirit of idealism and international friendship which is essential to the future peace of the world.

Because it provides a preparedness against disaster—local or international—and, with its experience and facilities, stands in readiness to succor victims of such calamities.

Because the American Red Cross is an expression of American citizenship.

Because it conserves the morale and family interests of the men who serve in our peacetime military and naval forces.

Because, in a word, it stands for all that is best in American life, and is a tie that binds you to America—and with Americans everywhere—for service.

AMERICAN GAS ASSOCIATION, INC.

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